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NOTE to the Reader

(1) This is the second of two articles published in the "Autumn 2018" issue of the Journal (released in February 2019). Due to the material involved, the proposed set of four articles were subsequently expanded to six, and the remaining four articles were published in the "Spring 2018" issue of the Journal (released in December 2019).

(2) The original paper's content remains unchanged; and, for the reader's convenience, the original paper's pagination is indicated as {40}, etc.

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James Braid (II): Mesmerism, Braid's Crucial Experiment, and Braid's Discovery of Neuro-Hypnotism

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Abstract

James Braid (1795-1860), natural philosopher, gentleman scientist, and inquisitive, sagacious, structured thinker, was an established and well-respected Manchester surgeon when, on 13 November 1841, he attended a *conversazione* on animal magnetism. This article provides details of his encounter with the magnetic demonstrator Charles Lafontaine, the immediate aftermath of that encounter, and Braid's *experimentum crucis*, which not only refuted Lafontaine's claims of magnetic agency, but also led to Braid's discovery of *neuro-hypnotism*. It also describes Braid's initial set of public lectures, within which he not only revealed and demonstrated the physical (rather than metaphysical) secrets of Lafontaine's procedures, but also disseminated his own rudimentary discoveries and theoretical explanations in what were the initial, rudimentary stages of his establishment of hypnotism as an entirely autonomous domain of philosophical and medico-scientific inquiry.

KEY WORDS: James Braid (1795-1860); animal magnetism; dominant ideas; hypnosis; hypnotherapy; hypnotic suggestion; hypnotism; mesmerism; phrenology; phreno-mesmerism; self-hypnosis

1. *Introduction*

Having briefly examined Braid's early life and professional career in Part I (Yeates, 2018a), and before examining his defence of himself and his ideas in Part III (Yeates, 2018c), and his final, sophisticated theoretical position in Part IV (Yeates, 2018d), we must examine how it all began with Braid's examination of the claims made by the magnetic demonstrator Charles Lafontaine—*and that, and that alone*. Braid was specifically concerned with Lafontaine's techniques, their validity, and their consequences; and, beyond his initial interest in Lafontaine, Braid paid little attention to mesmerism at all.

Braid is consistently represented as an insignificant 'English physician' (see, for instance, Erickson, et al., 1961, p.6) who, on viewing Lafontaine's work, {41} remarks (à la Pope Gregory), "This is not 'mesmerism', but 'hypnosis'!", and then shuffles off the stage into obscurity.

An historically accurate account must be presented, and an understanding (lost to the discipline for more than a century) must be restored. We must recognize the intellectual and practical significance of Braid's extension of the philosophers' notions of "*suggestion*" and "*dominant ideas*" (Brown, 1851) into the psychotherapeutic domain, and acknowledge the extent to which Braid's relentless, dogged *boundary-work* led to the establishment of *hypnotism* as an entirely autonomous domain of philosophical and medico-scientific inquiry.

2. *Conceptual Considerations*

2.1 "*Knowledge*", "*Testimony*", *and* "*Psychological Ownership*"

Many languages (English excluded) clearly distinguish between '*knowing that*', say, water is H_2O, and '*knowing how*', say, to ride a bicycle: e.g., Latin (*noscere* and *scire*); German (*kennen* and *wissen*); French (*connaître* and *savoir*), etc. Bertrand Russell (1911) distinguished between "*knowledge by acquaintance*" (from personal experience), and "*knowledge by description*" (from others' testimony). Clearly, whenever we acquire our knowledge *by acquaintance*, we feel a certain *psychological ownership* of that knowledge (see Pierce, Kostova & Dirks, 2001, 2003; and Yeates, 2004, pp.119-125).

2.2 *Evidence*

Using basic English, it is clear that an individual only *knows* XYZ if:

(a) they 'believe' XYZ to be the case (namely, they believe that XYZ is 'true'), and, significantly,

(b) they have objective 'evidence' that XYZ is, indeed, the case.

Consequently, whatever else '*evidence*' might be, it is something that:

(a) provides reasons supporting the statement 'XYZ is the case' being true;

(b) increases our *justification in* believing that 'XYZ is the case'; and, thus

(c) increases the *reasonableness for* us holding the belief that 'XYZ is the case' (e.g., see Kelly, 2016).

And, especially in those cases that Pyysiäinen (2002) calls *counter-intuitive events attributed to counterintuitive agents*, it's obvious that "an extraordinary claim requires extraordinary proof" (Truzzi, 1978, p.11).

2.3 "*Scepticism*", *not* "*Cynicism*"

So, if *knowing* is possessing a 'belief' that is *accurate*, *justified by evidence* and *true*, then those who 'believe' *without evidence* are either:

(1) *credulous*: believing that ABC is the case; and

(2) *incredulous*: believing that ABC is not the case (i.e., a '*cynic*').

There's also *the sceptic* (from Greek, *skeptesthai*, 'to consider carefully'): who, unlike *the cynic*, has an open mind, and is genuinely interested, but (unlike the credulous {42} and incredulous) is unwilling to form an opinion, because *they don't, as yet, have enough evidence*.

2.4 "*Pseudoscience*"

Dismissing the separate issue of intentional fraud—such as the Fox sisters' "rappings" in the 1850s (Abbott, 2012)—the pejorative label *pseudoscience* distinguishes the scientific '*us*', at one extreme, from the pseudo-scientific '*them*', at the other, and asserts that '*our*' beliefs, practices, theories, etc., by contrast with that of '*the others*', are *scientific*. There are four criteria:

(a) the 'pseudoscientific' group asserts that its beliefs, practices, theories, etc., are 'scientific';
(b) the 'pseudoscientific' group claims that its allegedly established facts are justified true beliefs;
(c) the 'pseudoscientific' group asserts that its 'established facts' have been justified by genuine, rigorous, scientific method; and
(d) this assertion is false or deceptive: "it is not simply that subsequent evidence overturns established conclusions, but rather that *the conclusions were never warranted in the first place*" (Blum, 1978, p.12, my emphasis; also, see Moll, 1902, pp.44-47).

The status of 'science proper' in Braid's day is critical to assessing assertions that phrenology *was* a 'pseudo-science': an entirely different issue from whether it would be considered scientific nonsense if it emerged today (cf., '*biorhythms*' in the late 1970s: see Hines, 1998). As Winter (1998, p.6) observes, there was "[no] professional class of scientists" in Braid's time—in fact, the term '*scientist*' was not coined until 1834: see Whewell (1834, p.5)—and "much of what would become recognizable as modern science" (i.e., activities "broken up into demarcated disciplines such as physics, biology, and chemistry") did not exist until the last third of the nineteenth century.

Mesmerism and phrenology were directly relevant to Braid's hypnotic research; and, rather than being 'pseudo-sciences', they were, using Weyant's (1980, p.79) categorization, "*potential sciences*" or "*proto-sciences*".

2.5 *Crucial Experiments and Watershed Moments*

A 'crucial experiment' (*experimentum crucis*) is an experiment that proves one of two competing hypotheses and, simultaneously, disproves the other. A (figurative) *watershed* is a critical point in the development of some 'thing', *prior to which its later form could not be predicted, and subsequent to which its earlier form is obsolete* (e.g., Marshall & Warren's (1984) discovery of *Helicobacter pylori*).

3. *Technical & Theoretical Considerations*

3.1 *The Conversazione*

In Victorian England, the *conversazione* was one of the most important educational, cultural, and recreational means through which scientific knowledge was disseminated and explanations of technical innovation were delivered to the general {43} public. Conducted by individuals,

institutions, or learned bodies, a (usually mixed amateur/expert, male/female) audience was enlightened by explanations, two-way interactions with participants, experiments, demonstrations, hands-on displays of equipment, and/or the exhibition of specimens (see Alberti, 2003; and Plunkett & Sullivan, 2012).

The *conversazione's* lectures/explanations delivered *knowledge by description*, and its experiments, demonstrations, hands-on displays of equipment, and exhibition of specimens delivered *knowledge by acquaintance* (with the concomitant *psychological ownership* of the knowledge so-acquired).

3.2 *The Animal Economy*

Originally, *economy* meant 'housekeeping' ('the management of a household'). The meaning of "*animal economy*"–which I render as '*psycho-physiological ecosystem*'—is perhaps best understood through Jean-Joseph Menuret's definition of "*Œconomie Animale (Médecine)*" in Diderot's *Encyclopédie* of 1765 (XI: 360–366):

> This term, taken in the most exact and common sense, refers only to the *order, mechanism, and overall set* of the functions and movements which sustain life in animals, the perfect, universal and constant exercise of which, performed with ease and alacrity, is the flourishing state of *health*, the least disturbance of which is itself *illness*, and the full ceasing of which is the extreme, diametrical opposite of *life*, that is, *death*.
>
> (Philippe Huneman's translation [at Huneman, 2008, p.618]).

3.3 *"Hypothesis non fingo"*

In 1713, Isaac Newton, having described law-like regularities of gravity, refused to speculate on the regularities' underlying cause, remarking "*hypothesis non fingo*" (lit. 'I feign no hypothesis [as to its mechanism]': Cohen, 1962; 1999, pp.274-277). Braid's teacher, Thomas Brown, who detailed the "antecedents and consequents which succeed each other in regular series" in his account of trains of thought (c.1810), adopted Newton's stance, and refused to speculate on the forces behind those regularities (1851, §.IX, p.52).

In 1843, Braid observing that hypnotic phenomena ensued from 'hypnotic states' simply because "it is a law of the animal economy that such effects should follow such [a] condition of mind and body", and—asserting that "this is a *fact* which cannot be controverted"—refused to speculate on its underlying mechanism, noting that "our ignorance of the cause of gravitation acting as it is known to do, does not prevent us profiting by an accumulation of the facts known as to its results" (*Neurypnology*, 1843, pp.31-32).

In 1852, Carpenter spoke of an "*ideo-motor principle of action*"; in 1853/1854, Noble spoke of an "*ideo-dynamic principle of action*"; and in 1891, Bernheim spoke of a "*law of ideo-dynamism*" (see

Sandor, 1980, pp.22-32). None of this trio ever speculated on the bio-physical mechanisms underlying such regularities.

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In the first place, we will suppose a person moderately sleepless. He has retired to bed and cannot rest. He tosses and tumbles about. Turns first on one side and then on the other. Shifts his pillow; pulls the bed-clothes over his shoulders; draws his knees up to his abdomen; places his right arm under his head; in short, exhausts the resources usually put in requisition on these occasions, and yet has failed to procure nature's sweet restorer – balmy sleep. What is then to be done?

••••••••••••••••

Let [the "sufferer"] turn on his right side, place his head comfortably on the pillow, so that it exactly occupies the angle a line drawn from the head to the shoulder would form and then slightly closing his lips, take rather a full inspiration, breathing as much as he possibly can through the nostrils. This however is not absolutely necessary, as some persons breathe always through their mouths during sleep, and rest as sound as those who do not. Having taken a full inspiration, the lungs are then to be left to their own action – that is, the respiration is neither to be accelerated nor retarded. The attention must now be fixed upon the action in which the patient is engaged. He must depict to himself that he sees the breath passing from his nostrils in a continuous stream, and the very instant that he brings his mind to conceive this apart from all other ideas, consciousness and memory depart; imagination slumbers; fancy becomes dormant; thought subdued; the sentient faculties lose their susceptibility; the vital or ganglionic system assumes the sovereignty; and as we before remarked, he no longer wakes, but sleeps.

This train of phenomena is but the effort of a moment. For the instant the mind is brought to the contemplation of a single sensation, that instant the sensorium abdicates the throne, and the hypnotic [viz., natural-sleep-inducing] faculty steeps it in oblivion.

Fig. 1. Gardner's System (taken from Binns, 1842, pp.390-392).

3.4 *Opprobrium Medicorum*

The expression (lit., '*physicians' disgrace*'), common in Braid's time, denotes conditions for which no effective remedy exists; and, whenever Braid used it, he wasn't criticizing medical practitioners—he was simply observing that a particular disorder was beyond the reach of the current medical technology, *even in the very best of hands*.

3.5 *"Hypnology": Braid's Super-Ordinate Term*

Most disciplines (geology, physics, chemistry, etc.) have distinctive super-ordinate terms, whilst the discipline centred on the hypnotic state does not (see Yeates, 2016b, pp.29-30). Consequently, given the precision of his 1842 taxonomy, Braid's almost {45} immediate retraction of his original super-ordinate term *hypnology* (an abbreviation of *neuro-hypnology*) requires some explanation.

Belfast watchmaker Henry Gardner (1777-1842), on moving to England in 1839, advertised "hypnology"—"a system for producing sound, refreshing sleep at will, without the aid of animal magnetism, or any medicine whatsoever". He was subjected to much derision (e.g., Anon, 1840; Timbs, 1873; Charles Dickens, 1842). His clients were sworn never to reveal his methods; however, just before his death, Gardner sold his system to Edward Binns, MD, and Binns published the details of it almost immediately (see Fig.1; and Binns, 1842, pp.354-361).

Gardner's claim to be a "hypnologist", with all of its "natural sleep" associations, and Binn's publication of Gardner's (heretofore secret) method, forced Braid to jettison "*hypnology*" not long after his coinage; but, unfortunately, not before *Neurypnology* was published—wherein Braid speaks of the superiority of his approach (vis-à-vis that of Gardner's) in producing "sleep at will" (pp.75-78). [In 1902 and 1907, Watkins distinguished "hypnologists", those seeking to induce natural sleep in the sleepless, from "hypnotists", those seeking to induce hypnotism, noting that, "a hypnologist is one thing, a hypnotist another" (1902, p.425).]

A decade later, having developed a better understanding of both somatopsychic and psychosomatic processes, Braid expressed deep regret at his initial (then inevitable) choice of the term hypnology. Upon considered reflection, Braid said (1855, p.10), he would, now, without reservation, choose "*psycho-physiology* … as a *generic term* [for] the *whole* of these phenomena which result from the reciprocal actions of the mind and matter upon each other" on the grounds that "no term could be more appropriate".

3.6 *"Rapport"*

Rather than the 'mutual-get-along-able-ness' of modern counsellors, the technical term, *en rapport*—from '*se mettre en rapport*' ('in magnetic connection with')—came directly from physics. Magnetized subjects were said to be *en rapport* with their magnetizer, in precisely the same way that iron filings were in magnetic connection with a magnet; thus, the presence or absence of *rapport* was always a consequence of specific subject-responses, rather than operator-outputs (see Newnham, 1845, pp.91-92, 268-269; Yeates 2013, pp.104-109, 258; Melton, 2001b, p.1285-1286). The notion of '*rapport*', although widespread by the 1840s, *was not one of Mesmer's*; in fact, the concept was "[entirely] unknown to Mesmer and his immediate disciples" (Carpenter, 1853,

p.534). However, many theory-driven 'experts', such as Bernheim and Liébeault (incorrectly) held that:

(a) hypnotization could only occur when subjects were *en rapport* with their hypnotist, and

(b) subjects only responded to suggestions delivered by those with whom they were *en rapport* (see Figs.2a and 2b).

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Mesmeric Application	**Hypnotic Application** (by analogy)
(1) A is the mesmerist; B is the subject.	(1) A is the hypnotist; B is the subject.
(2) If A's actions project B into a 'mesmeric state', it is said that A has 'mesmerized' B.	(2) If A's actions project B into a 'hypnotic state', it is said that A has 'hypnotized' B.
(3) By the (prevailing) theories of 'animal magnetism', (2) was only possible because the (charismatic) mesmerist (A) possessed particular 'magnetic powers'.	(3) By the (prevailing) theories of 'hypnotism', (2) was only possible because the (charismatic) hypnotist (A) possessed particular 'hypnotic powers'.
(4) The degree to which the mesmerist (A) had 'magnetic powers' could only be measured/calibrated by the degree to which they had the capacity to project their subject (B) into a 'magnetized state'.	(4) The degree to which the hypnotist (A) had 'hypnotic powers' could only be measured/calibrated by the degree to which they had the capacity to project their subject (B) into a 'hypnotic state'
(5) 'Magnetized' subjects were not 'ferromagnetic' (and, so, did not retain the 'magnetism' that A had induced in them).	(5) 'Hypnotized' subjects did not remain 'hypnotized' in the absence of the hypnotist (A).
(6) However, 'magnetized' subjects were 'paramagnetic': i.e., they only displayed their 'magnetized state' while under the influence of the mesmerist's 'magnetism'.	(6) 'Hypnotized' subjects only displayed their 'hypnotic state' while they were under the influence of the hypnotist's 'powers'.
(7) Subjects were 'magnetized' because of (i) their own 'paramagnetic' character, and (ii) the symmetrical relationship between the mesmerist's idiosyncratic 'magnetic forces' and their own natural propensity to be 'magnetized'.	(7) Subjects were only 'hypnotized' because of (i) their own native propensity, and (ii) the symmetrical relationship between the hypnotist's idiosyncratic 'hypnotic forces' and their own natural propensity to be 'hypnotized'.
(8) Whilst A could easily mesmerize B, A might not be able to mesmerize another, different subject (C) – simply because C's natural propensity to be magnetized was inconsistent with the 'magnetic force' of A.	(8) Whilst A could easily hypnotize B, A might not be able to hypnotize another, different subject (C) – simply because C's natural propensity to be hypnotized was inconsistent with the 'hypnotic force' of A.

Fig. 2 (a). Mapping the 'rapport' analogy from mesmerism to hypnotism (modified from Yeates, 2013, p.109)

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(9) Whilst A can easily mesmerize B, another individual, X, may not be able to mesmerize B at all – simply because X's 'magnetic forces' were inconsistent with B's natural propensity to be magnetized.	(9) Whilst A can easily hypnotize B, another individual, X, may not be able to hypnotize B at all – simply because X's 'hypnotic forces' were inconsistent with B's natural propensity to be hypnotized.
(10) [From 1,2,3,4,6,7] Whenever A has 'mesmerized' B, B is said to be ***en rapport*** ('in a magnetic relation with') with A.	(10) [From 1,2,3,4,6,7] Whenever A has 'hypnotized' B, B is said to be ***en rapport*** ('in a hypnotic relation with') with A.
(11) From the (prevailing) theories, it was considered that, to the extent to which A could 'mesmerize' B with grace and ease (i.e., to the extent that B was ***en rapport*** with A), other mesmerists could not do so.	(11) From the (prevailing) theories, it was considered that, to the extent to which A could 'hypnotize' B with grace and ease (i.e., to the extent that B was ***en rapport*** with A), other hypnotists could not do so.
(12) Whenever mesmerist A wanted to transfer duties to an associate (Z), B would be informed that A's 'magnetic powers' had now been transferred to Z and that, from now on, B would only respond to the magnetic influence of Z.	(12) Whenever hypnotist A wanted to transfer duties to an associate (Z), B would be informed that A's 'hypnotic powers' had now been transferred to Z and that, from now on, B would only respond to the voice of Z.
(13) To the extent to which A's magnetic 'powers' had been transferred to Z, A was subsequently bereft of those 'magnetic powers'; and, therefore, A could no longer generate alterations in B's status quo.	(13) To the extent to which A's hypnotic 'powers' had been transferred to Z, A was subsequently bereft of those 'hypnotic powers'; and, therefore, A could no longer generate alterations in B's status quo.
(14) This shift of 'magnetic power' from A to Z was routinely referred to as a transferral of '***rapport***'; and, moreover, it was always spoken of in terms of B moving from 'being ***en rapport*** with A' to 'being ***en rapport*** with Z'.	(14) This shift of 'hypnotic power' from A to Z was routinely referred to as a transferral of '***rapport***'; and, moreover, it was always spoken of in terms of B moving from 'being ***en rapport*** with A' to 'being ***en rapport*** with Z'.

Fig. 2 (b). Mapping the 'rapport' analogy from mesmerism to hypnotism (modified from Yeates, 2013, p.109)

Braid's early experiments clearly demonstrated that, not only was there no need for any *rapport*, and no need for a hypnotist (*Neurypnology*, pp.142-3), but also that the presence of any supposed 'rapport' was thoroughly explained by the 'dominant idea' principle. Braid's later experiments

(1846, pp.31-34), and those of Moll (1892; 1897, pp.182-184) and Bramwell (1903, pp.342-344) demonstrated that:

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(a) "*rapport* does not appear unless it has been directly or indirectly suggested [by] the operator", or "by self-suggestions which result from a subject's [own] conception of the nature of the hypnotic state" (Bramwell, p.344; also, see footnote at Hull, 1933, p.35); and

(b) (in the absence of direct/indirect operator suggestions), all subjects were well aware of "what had been said and done by others [with whom they were not] *en rapport*"—and, further, "[all subjects] heard and obeyed any one who might address them" (Bramwell, p.344).

The earlier claims (e.g., Académie Nationale de Médecine, 1833) that magnetized individuals, with whom a third person was *en rapport*, could (i) accurately diagnose that third person's illness, (ii) prescribe their optimal treatment and (iii) deliver an accurate prognosis of their condition, *had no foundation whatsoever*. It was Elliotson's use of Elizabeth O'Key, in the University Hospital's wards, secretly, in the dead of night, to diagnose, prescribe, and deliver prognoses of patients under his care, that was the principal cause of his dismissal—rather than his advocacy of mesmerism (Elliotson, 1846), or his demonstrations of mesmerisation (see Clarke, 1874, pp.155-194; Winter, 1998, pp.60-108; and Forrest, 1999, pp.136-168).

4. *Mesmerism & Animal Magnetism*

4.1 *Mesmerism vs. Animal Magnetism*

Although any discussion of the vast range of theories and practices denoted "mesmerism (see: *The Zoist*, Vols. 1-13, passim; Podmore, 1909, pp.1-150; Edmonston, 1986, pp.1-121; Gauld, 1992, pp.1-270; and Crabtree, 1993, pp.109-144, etc.) lies beyond this article, in order to clarify certain ambiguities and correct particular errors that persist in the literature, a number of basic facts must be stated:

(a) Mesmer did not invent a technique. He created an explanatory model to represent the way healers had been healing people for thousands of years; and, as Tatar explains (1990, p.49), mesmerism was not an "occult doctrine", but was "[a] theory invoked to explain its agency [that] fit squarely into the frame of eighteenth-century cosmology".

(b) In Mesmer's materialist view, it was a physiological (not a 'psychological') therapy, involving a set of easily understood, systematic *natural* principles—that is, by contrast with the metaphysical claims of *supernatural* agency made by the exorcist Gassner, the magnetist d'Eslon, the mystic Faria, etc.

(c) Inspired by his direct observation of Hell's application of steel magnets shaped to fit body contours (see Pattie, 1994, pp.33-41), Mesmer purchased several of these special,magnets from Hell in 1774—however, by 1776, Mesmer's own experimentation had revealed they were useless, and he "abandoned the use of magnets" entirely (ibid., p.2).

(d) Mesmer continued to present his treatment rituals associated with various magnetic connotations, such as the *Baquet* (ibid., pp.70-71)—obviously, designed to amplify each subject's "*response expectancy*" (Kirsch, 1997, etc.) via impressive "*metonymical acts*" (Topley, 1976, p.254).

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(e) The first mesmeric anaesthesia was on 12 April 1829, when Cloquet removed a massive tumour from a woman who had been mesmerized by her physician (Brierre de Boismont, 1855, pp.251-255). [For more on mesmeric anaesthesia see Part IV (Yeates, 2018d).]

(f) Mesmerism was introduced to the UK just two weeks after Cloquet's operation by Richard Chenevix (see Chenevix, 1829)—also a "phrenological enthusiast" (Leaney, 2006, p.30)—whose mesmeric demonstrations were attended by many eminent people, including Faraday and Elliotson.

(g) Mesmerists and animal magnetists were alike, in that:

(i) they held that all animate beings (including animals and plants), in virtue of being alive, possessed an invisible, natural, 'magnetic', or 'gravitational' force ('*magnetismus animalis*'; '*gravitas animalis*'); and,

(ii) their interventions were directed at manipulating the ebb and flow of a subject's 'energy field'.

(h) They were also different:

(i) the materialist mesmerists, in order to promote *orthopraxia* (viz., 'correctness of *behaviour*', as distinct from *orthodoxia*, 'correctness of *theory*'), used *analogies* with gravity, terrestrial magnetism, and hydraulics to explain their techniques and rationale ("When we call this principle *magnetic fluid*, *vital fluid*, we are using a figurative expression. We know that something emanates from the magnetizer: this something is not a solid, and we call it a *fluid*.": Deleuze, 1814, p.233), while

(ii) the metaphysical magnetists, by contrast, (mistakenly) *reified* Mesmer's magnetic/fluidic metaphors, and firmly believed that they were channelling a substantial '*fluidium*' and manipulating *a particular force* (For more on "action at a distance" see Hesse, 1961; and, especially, Kovach, 1979, pp.161-171).

(i) Mesmerism is used as an intervention to treat profound illness (e.g., Hallaji, 1962; MacHovec, 1975), as well as disease in domestic, farm, circus, and zoo animals (see Wilson, 1839, Völgyesi, 1938, etc.).

(j) Research has identified substantial differences between '*hypnotism*' and '*mesmerism*' (e.g. Völgyesi, 1938; Hallaji, 1962; MacHovec, 1975, 1979; Pulos, 1980; Chester, 1982; McGarry, 1987; Gauld, 1988, 1992; Gibson & Heap, 1991).

4.2 ***Reports of the 1784 French Royal Commissions on "Animal Magnetism"***

In 1784 two separate Commissions were established by Royal decree; and, although conducted simultaneously, and despite being charged with investigating the same matters, "when d'Eslon, through influential friends, and tact, and other favourable circumstances, procured [their] establishment [specifically] to investigate animal magnetism as practised in his own clinic" (Gauld, 1992, p.7), the two Commissions operated independently. [Charles d'Eslon (1750-1786), a *docteur-régent* of the Paris Faculty of Medicine, one-time personal physician to the Comte d'Artoir (later King Charles X), and a former patient, pupil, and associate of Mesmer's had {50} (acrimoniously) parted ways with Mesmer 18 months before the Commission; and, following his break with Mesmer, d'Eslon not only launched his own clinical operation, but also began teaching his own theories and practices (see Brown, 1933; Gauld, 1992, pp.6-7; Crabtree, 1993, pp.16-18; Pattie, 1994, pp.86, 94-116, etc.).]

(a) Usually referred to as "The Franklin Commission", appointed in March 1784, composed of four physicians from the Paris Faculty of Medicine (J. d'Arcet, J.-I Guillotin, M.J. Majault, and C.L. Sallin), and five scientists from the Royal Academy of Sciences (J.-S. Bailly, G. de Bory, B. Franklin, A. Lavoisier, and J.B. Le Roy). It produced two Reports:

(i) a report 'for public consumption'—emphatically stating that there was no evidence of any 'magnetic fluid', and that all "effects" observed by the Commissioners could be attributed to "contact", or to "imagination", or to "imitation"—issued in August 1784 (Bailly, 1784; trans. at Franklin, et al. 2002).

(ii) a secret report 'for the King's eyes only'—addressing the perceived moral dangers occasioned by the practice of animal magnetism—presented privately to the King in August 1784; its contents were eventually published in 1800 (Bailly, 1800; trans. at Bailly, et al., 2002).

(b) "The Society Commission", appointed in April 1784, composed of five eminent physicians from the Royal Society of Medicine (C.-L.-F. Andry, C.-A. Caille, A.-L. de Jussieu, P.J.C. Mauduyt de La Varenne, and P.-I. Poissonnier). It generated two reports:

(i) a report (far less influential, far less detailed, and the result of far less thorough investigations than the Report of the "Franklin Commission") signed by four of the five Commissioners—also found no evidence of d'Eslon's 'magnetic fluid', and declared that all observed "effects" could be attributed to "contact", or to "imagination", or to "imitation"—issued in August 1784 (Poissonnier, et al., 1784; for summary, see Crabtree, 1993, p.28, and Pattie, 1994, pp.156-158).

(ii) a dissenting report signed by one of the Commissioners, Antoine-Laurent de Jussieu, who believed that—despite d'Eslon's 'magnetic fluid' claims having been debunked— there were sufficient "effects" (such as, for instance, 'post-magnetic amnesia') unattributable to "imagination" that still required further investigation into their exact nature; and, therefore, he argued, the continued use of animal magnetism was justified (de Jussieu, 1784; for summary, see Crabtree, 1993, pp.28-29, and Pattie, 1994, pp.152-153).

Both Commissions concentrated on d'Eslon's claims for the existence of "animal magnetism". On the rational assumption that, although "animal magnetism may well exist without being useful … it cannot be useful if it does not exist", the primary concentration of each Commission was on establishing the substantial existence (or not) of the (alleged) "animal-magnetism fluid" (Franklin, et al., pp.335-336), rather than examining its alleged application and/or utility.

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Kihlstrom's (2002) observations on the Commission's examination into the consequences of 'magnetic treatment'—namely, "to unravel the causes [of those consequences] & to search for proof of the existence & the utility of magnetism" (Franklin, et al., p.335)—resonate with the interest recently expressed by scientists in other scientific domains (e.g., Gould, 1989; Green, 2002; Best, Neuhauser & Slavin, 2003; Herr, 2005; Lanska & Lanska, 2007, etc.) in this (previously unrecognized) '*classic*' example of a controlled trial (see also, for example, Dunn, 1997, and Lind, 1772; Booth, 2005, and Haygarth, 1801; and Evans, 1958, and Flint, 1863).

The Franklin Commission's investigations considered the influence of a wide range of potentially significant variables; and, in addition to using themselves as subjects from time to time, because "they were very curious to experience through their own senses the reported effects of this agent" (Franklin, et al., p.339):

(a) they tested subjects from all classes of society in both group and one-to-one treatment settings.

(b) (given claims that "animal magnetism" affected 'the infirm' differently from 'the healthy'), they tested d'Eslon's procedures on *genuine* 'healthy', *genuine* 'infirm', and *sham* 'infirm'

subjects;

(c) they observed and compared the responses of subjects when blindfolded and when not;

(d) they observed the responses of all varieties of subject to *genuine* and *sham* 'magnetization'; and, as well, their responses to *genuine* and *sham* 'magnetized' locations, objects, apparatus, and equipment.

Finally, in relation to Mesmer and mesmerism, several important facts need to be stated:

(a) Neither set of Commissioners examined Mesmer's practices; they only investigated d'Eslon's.

(b) Both sets of Commissioners had one primary concern: did d'Eslon's "animal magnetism" exist?

(c) Aside from the fact that their allotted task was to investigate d'Eslon's work, they had two important reasons for not investigating the veracity of Mesmer's claims of "cures":

(i) they had no persuasive evidence to suggest that Mesmer's patients had not been "cured", and

(ii) on the simple grounds that, "observations over the centuries prove & Physicians themselves recognize, that Nature alone & without the help of medical treatment cures a great number of patients" (ibid. p.338), the Commissioners agreed with Mesmer's own observation that "cures", in themselves, could not provide evidence of (metaphorical) "animal magnetism"—viz., that "*nothing conclusively proves that the Physician or Medicine heals the sick*" (ibid.)—and, that, in Mesmer's view, it was "*a mistake to believe that this kind of proof is irrefutable*" (ibid.).

[In other words, the Commissioners simply took Mesmer's "cures" as a 'given'.]

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(d) A commonly expressed, and extremely misleading ambiguity can now be exposed, unpacked, and clarified: although it is entirely correct to assert that both sets of Commissioners accepted that Mesmer's "cures" were, indeed, "cures", it is completely wrong to suggest that any of the Commissioners accepted that any of those "cured" individuals had been "cured" by Mesmer.

4.3 *"Higher" & "Lower Phenomena"*

Magnetists distinguished between *higher* (more extraordinary) and *lower* (more ordinary) *phenomena*, implying that, while there might be *natural explanations* for 'lower' phenomena, 'higher' phenomena could only be explained in terms of a *paranormal* or *metaphysical agency*:

(a) 'lower' phenomena included: displays of amnesia, state dependent memory, loss of sense of identity, suggestibility, heightened memory, deadening of the senses, insensibility to pain, rapport with the operator, and *Schlafwachen* ('sleep-waking': see Elliotson, 1835, pp.627-630; "Herfner", 1844, pp.81-83, etc.).

[N.B. Though the defining "*somnolence*" of the *sleep-waking* state—a sub-set of *sleepwalking*—was often combined with "*somniloquism*" ('*sleep-talking*'), it was never combined with "*ambulism*" ('*walking*') of any sort (Barth, 1851, p.24).]

(b) 'higher' phenomena included: displays of transposition of the senses (hearing with fingers, sensing colours with the soles of the feet, etc.: see Melton, 2001a, 533-534; 2001b, pp.1027, 1359-1360, 1499, 1585, etc.), physical rapport or '*community of sensation*' (subjects experiencing the operator's physical sensations of taste, smell, etc.: see Townshend,1840, p.65; Melton, 2001a, p.319, 2001b, pp.989-990, etc.), clairvoyance (seeing persons/events distant in time or place: see Melton, ibid., pp.297-301), psychical rapport (able to read operator's thoughts, and be mesmerized from a distance Crabtree, 2008, p.569), and ecstasy ("immersed in an elevated state of consciousness with an awareness of spiritual things": Crabtree, 1988, p.xxiv; 2008, p.569).

4.4 *Social Impact*

The effects of mesmerism—predicated upon the presence of a force analogous to gravity (which, unlike magnetism, affected all objects equally)—were equally demonstrated by all, regardless of age, gender, class, race, intellect, etc. (Castronovo, 1999); and it's not remarkable that this fact influenced many of the moves within society towards democracy and greater equality (see Fuller, 1982; Darnton, 1968, esp. pp.106-125).

5. *Phrenology*

> In its own time phrenology… was a serious, inductive discipline, accepted as such by many eminent scientists, doctors, and educators; its aberrations were the results not so much of charlatanism or credulity as of the limitations of early nineteenth century scientific method and medical techniques.
>
> {53}
>
> However mistaken some of its anatomical deductions may have been, scientific it was in its determination to study the mind objectively, without metaphysical preconceptions.
>
> Davies, 1955, pp. x-xi

5.1 *Franz Joseph Gall (1758-1828)*

Based upon an extensive, logical process of reasoning, involving nine different aspects (see Gall, 1835, pp.104-135), conceptualized in 1798 (Gall, 1798; translated at Goyder, 1857, pp.143-152), and

first promoted in Vienna, c.1804, Gall's biological/rational basis for the study of the human mind, human mental function, and human behaviour was simple, uncomplicated, and comprehensive. Most significantly—unlike mesmerism—*it emphasized the differences between people, rather than their homogeneity* (see Young, 1970).

1.The brain is the organ of the mind.
2. The mind is composed of multiple, distinct, innate faculties.
3. Because they are distinct, each faculty must have a separate seat or "organ" in the brain.
4. The size of an organ, other things being equal, is a measure of its power.
5. The shape of the brain is determined by the development of the various organs.
6. As the skull takes its shape from the underlying brain, the surface of the head can be read as an accurate index of psychological aptitudes and tendencies.

Fig.3. The basic tenets of Gall's craniology
(van Wyhe, 2004, p.vi.)

5.2 *Criticism*

In 1803, Braid's teacher, Thomas Brown, MD, wrote a fierce attack on phrenology for *The Edinburgh Review* (Brown, 1803). In 1815, John Gordon, MD, wrote another article debunking phrenology (Gordon, 1815). At the time of Gordon's article, Gall's associate, Johann Spurzheim, had been lecturing in the UK for six months; and, so, despite claims that *mesmerism* extended into distant antiquity, and despite phrenology only emerging c.1804, it is a matter of fact that phrenology, via Spurzheim, *was introduced into the UK at least 14 years before Chenevix's London mesmeric lectures.*

5.3 *Advocates*

John Elliotson was first President of the London Phrenological Society. William Engledue, his *Zoist* co-editor, served as President of the British Phrenological Association (Engledue, 1842). Braid's colleague, Daniel Noble, was President of {54} the Manchester Phrenological Society, and published works on phrenology (1834, 1835a, 1835b, 1837, 1842, and 1846). [In a critical review of Noble's *Brain and its Physiology* (1846), Carpenter (1846) pulled Noble's views apart so effectively that Noble immediately re-examined his position, recanted his views, and abandoned phrenology altogether (Noble, 1853, pp.xi, 48).]

5.4 ***Overview***

Any extended examination of *phrenology* (e.g., Davies, 1955; Young, 1970; Cooter, 1976a,b,c; and Leaney, 2006), its attempt to study the mind objectively, its revolutionary 'materialist' suggestion that the brain (not the soul) was the centre of consciousness, its early (but, ultimately, unfulfilled) promise as the first-ever 'brain science', and the fact that *the precision of its external physical measurements* led ever so many to (mistakenly) believe that specific internal correlates—of which those measurements were supposedly indexes—*were just as accurately mapped*, etc., belongs elsewhere. However, certain facts need to be stated:

(a) In the early 1800s there was no precise anatomical and physiological knowledge, no evidence of a relationship between brain and mind, and no evidence of any relationship between physiology and behaviour.

(b) In the early 1800s the mind and its operation were routinely explained in metaphysical terms.

(c) Phrenology must not be confused with two other (apparently) similar enterprises:

(i) *craniometry* (skull measurement): essentially an activity confined to physical anthropology; or

(ii) *physiognomy* (interpretation of features): essentially a psychological activity (not fortune-telling!) that assessed personality/character from outer appearances (particularly the face).

(d) Despite concentrating on physical measurement of the skull, *phrenology* (lit. 'study of the mind'), originally known as *cranioscopy* (lit. 'skull examination') (see Noel & Carlson, 1970), was exclusively concerned with:

(i) the determination of an individual's character, personality type, cognitive capacity, and behavioural propensity, and

(ii) the presence/absence and consequent strength/weakness of each such trait.

(e) Despite being completely abandoned by mainstream science by the middle of the 19th century, it remained immensely popular, and very widely used (e.g., Duichin, 2012).

6. Phreno-Magnetism (a.k.a. Phreno-Mesmerism)

6.1 ***Collyer's Discovery and Subsequent Retraction***

Discovered by Robert Hanham Collyer in November 1839 (Collyer, 1843, p.10; 1871, pp.49-50), *phreno-magnetism* involved the activation of specific phrenological organs, via the operator's 'magnetization', directly through the corresponding cranial area. Its significance was that, to supporters, the theoretical position of each 'science' had now been confirmed by the other. In mid-

1843, Collyer announced that further experiments had revealed he was wrong; and *there was no such thing as phreno-magnetism at all*

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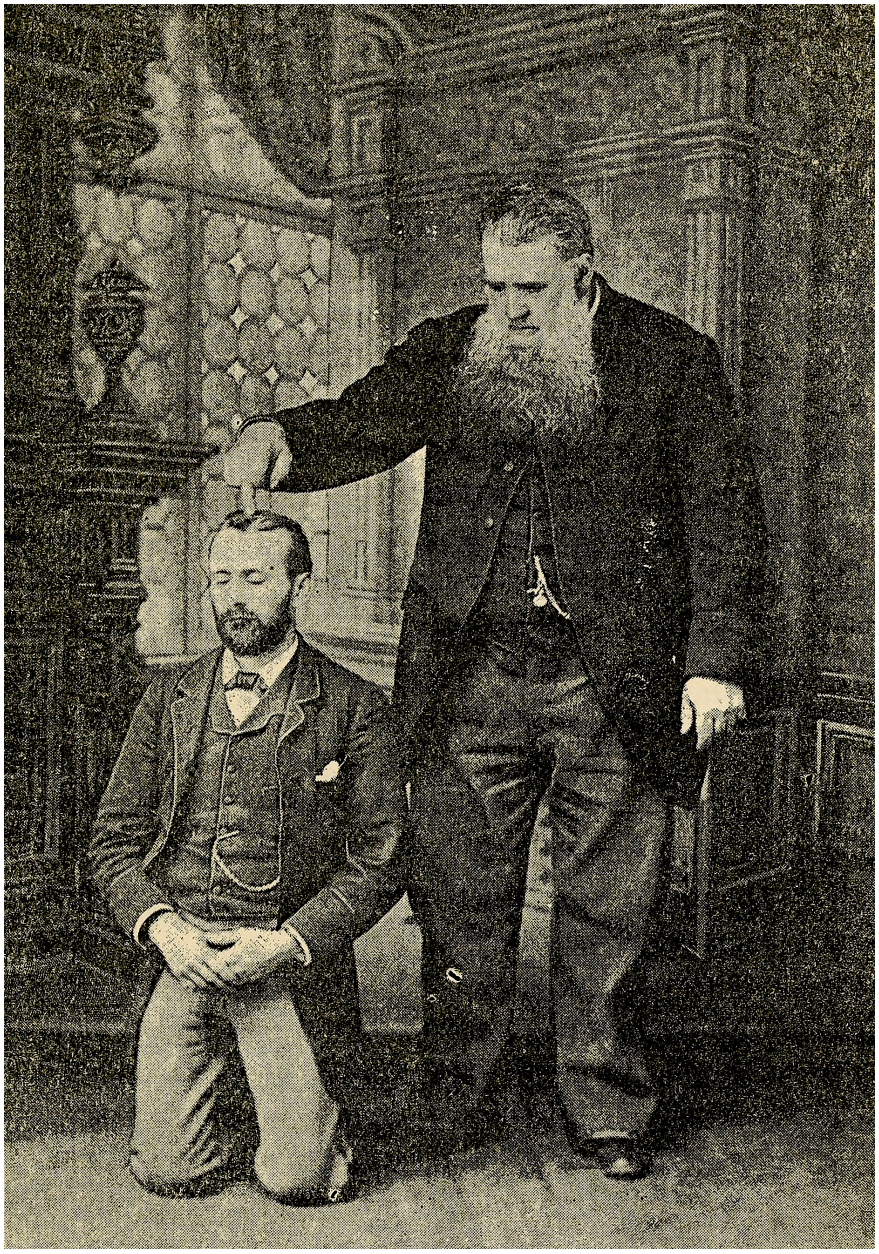


Fig.4. A Phreno-Mesmerist "exciting the Organ of Veneration" (Younger, 1887, facing p.68.)

(1843, pp.8-20). Unaware of Collyer's retraction, Braid made a careful examination of "phreno-hypnotism" in December 1842 (*Neurypnology*, p.105-149).

6.2 *Braid's Wider Investigations*

Braid continued experimenting (see 1843b) until 3 August 1844, concluding, along with Colquhoun (1843), that there was no foundation for phrenology, in general, and for phreno-mesmerism, in particular. Braid also concluded that 'phreno-mesmeric' phenomena were entirely due to "[excitement] by auricular suggestion, [or] by muscular suggestion, or [by] manipulating

either the head, trunk, or extremities" (1844, p.181). Braid had no further connection with phrenology.

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6.3 *Decline*

So, *phreno-mesmerism*, which once promised a wide range of valuable therapeutic and moral applications (see Newnham, 1845, pp.374-411), soon morphed into theatrical performances demonstrating the 'reality' of phrenology to credulous audiences, with lecturers pressing specific locations on the cranium of their mesmerized subjects, and their subjects immediately displaying responses appropriate to the characteristics of each phrenological zone (e.g., Fig.4).

6.4 *Vestigial Traces of Phreno-Mesmerism*

The routine hypnotic inductions of the "Salpêtrière School" and the "Nancy School" used heavy pressure on the forehead and rubbing of the top of the head (see Gauld, 1992, 306-356, passim). Around 1885, Salpêtrière's Albert Pitres went even further (Pitres, 1891, pp.97-116) and, in a complete throwback to phreno-mesmerism, claimed to have discovered:

(a) *hypnogenetic zones* ("*zones hypnogènes*"): which, when stimulated, instantly threw subjects into the hypnotic state (p.98); and

(b) *hypno-arresting zones* ("*zones hypnofrénatrices*"): which, when stimulated, abruptly terminated the hypnotism (p.101).

While these zones differed for each individual (e.g., pp.103, 107, 109, 499), they remained constant for each individual (i.e., they had a "*position habituelle*": p.497).

Freud not only used hypnotism for some time, but the hypnotism he employed involved rubbing the top of the head, *à la Salpêtrière*, with him sitting at the end of the couch in order to gain easy access to the subject's the head—a practice Freud continued for his entire (post-hypnotism) professional career. Another vestige of phreno-mesmerism was Freud's application of Bernheim's "head pressure" technique (see Freud, 1957/1895, pp.107-112).

7. *Charles Lafontaine*

Charles Lafontaine (1803-1892) came from a theatrical family. He was introduced to mesmerism in 1831. Soon after, he abandoned the theatre altogether, and began touring Europe (Lafontaine, 1847, 1860, 1866).

7.1 *England*

"[Of] middle age, slightly above middle size, with a well-set muscular frame, [and] clothed in black", with "dark" hair", a "very profuse" beard, that "descended to his breast", and a "bold,

powerful, and steady" eye (Hall, 1845, p.1), Lafontaine, the '*magnetic demonstrator*' (Gauld, 1992, p.163), arrived in England in June 1841. [Elliotson was certain that Lafontaine came to England for "pecuniary" reasons, and left once he "found the affair unsuccessful" (S.I.L.E., 1843, p.93).] Lafontaine neither spoke nor understood English; and never attempted to learn it—he sometimes used interpreters, but mainly relied on the far-from-satisfactory translation efforts of audience members.

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7.2 *London*

Lafontaine's first demonstrations of 'animal magnetism' were in London on 19 July 1841. He lectured, reciting rapidly (in French) from prepared notes, describing the wide range of his supposed cures, and asserting that the reality of animal magnetism had been proved beyond doubt. He mesmerised one assistant, and then another; producing *somnolence* and, later, limb *catalepsy*. He stuck pins into their head and cheeks, put the strongest smelling salts and the most pungent, lighted matches under their nostrils, loudly exploded percussion caps beside their ears, sent strong currents from electro-magnetic generators through their bodies, connected them to voltaic batteries—all without any response or apparent suffering. Significantly, once 'de-magnetised', his subjects had no recollection of what had taken place.

In all, he delivered four lectures in London (19 July, 2 August, 12 August, and 9 September 1841), one lecture in Brighton (22 September 1841), and a final, fifth London lecture (7 October 1841). London audiences were far from satisfied with his incoherent presentations, and his lack of success in 'magnetizing' audience volunteers. He was often the target of hecklers.

7.3 *Lafontaine's Induction Technique*

Lafontaine's technique (see Fig.5) was a combination of physical contact, mesmeric passes, and eye-fixation. It began with operator and subject facing each other. The operator held the subject's thumbs. Lafontaine stressed the importance of the initial physical contact, and the subsequent operator-imposition of 'mind control' *once 'rapport' had been established*. Although generally successful with his assistants, he was rarely successful with volunteers (only successful in "one in four or five cases": Anon, (1842), p.29); and was, very often, forced to abandon his attempts after some thirty minutes or so of intense effort.

7.4 *Insensibility*

No doubt, for the general audience, the most impressive aspect of Lafontaine's display was the *total insensibility* of his demonstration subjects to stimuli—attributed, by Lafontaine, to their

'magnetisation'. Yet, many with medical knowledge were unconvinced. "Scrutator" (1841), who attended Lafontaine's demonstration, said none of Lafontaine's experiments were proof of any sort of magnetic agency—it was already known, he wrote, that long acupuncture needles were painless—and, even if genuine, Lafontaine's 'effects' were not due to 'magnetism', but to the "condition of mind [attending the] state to which persons of a nervous and excitable temperament are especially liable"; and these "delusions of an excited and uncontrolled imagination [were known] to occur in numerous instances where magnetism was out of the question"—a fact that would be attested by "all medical men of experience".

Others, such as "A Correspondent" (1841), on viewing Lafontaine's demonstrations, immediately recalled the infamous 18-year-old malingerer, Phineas Adams, jailed for desertion in 1811, who, upon incarceration, suddenly became *comatose*, although his pulse and respiration remained normal. Adams was *insensible to all stimuli*: pins under fingernails, snuff up nostrils, electric shocks, etc.—with the single exception of

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- Before commencing, all present must sit and keep quiet. It is essential that neither subject nor magnetizer are distracted during the process. The magnetizer must be able to carefully observe all of the sensations displayed on the subject's face.
- When starting, the magnetizer will concentrate upon himself, and concentrate his entire will on the single idea of acting upon the subject.
- The patient and magnetizer sit facing each other, with the subject's knees below those of the mesmerizer (not touching them), with the magnetizer's seat higher than the subject's seat – so that the magnetizer can easily reach the top of the subject's head without fatigue.
- The magnetizer then touches the tips of the subject's thumbs with the tips of his own without shaking them.
- This thumb contact puts the magnetizer's brain ["*cerveau*"] in direct contact with ["*mettra en rapport direct*"] the subject's brain ["*cerveau*"]; with the subject's nerve networks, through this, forming an extension of the magnetizer's own nerve networks. And this connection – serving as a conductor of the magnetic fluid – results in a faster and more complete invasion of the patient's nervous system ["*plus prompt et plus complet l'envahissement du système nerveux du patient*"].
- The magnetizer fixes his eyes on the subject's eyes; and the subject tries his hardest to look at the eyes of the magnetizer.
- This activity continues, in this fashion, for **15-20** minutes. It is probable that, during this time, the subject's pupils will contract or dilate to an exaggerated degree – and that his eyelids will lower themselves, unable to rise again, despite the subject's efforts.
- Having attained this eye closure, the magnetizer continues to hold the subject's thumbs until the movement of the eyes beneath the lid and the swallowing have both ceased.

Fig.5 (a). Lafontaine's Technique
(translated from Lafontaine, 1860, pp.62-64.)

a solitary groan uttered when a surgeon, investigating the possibility of brain injury, lifted his scalp and scraped his exposed skull. After four months' investigation, Adams' case was thought hopeless. Still comatose and insensible, he was discharged, and taken home. Immediately home, Adams fully recovered and, two days later, was seen up a ladder actively helping his father thatch a hay-rick, two miles away. Hearing that a press gang was seeking him, Adams absconded, and was never heard of again (Anon, 1813a; Beck, 1825, p.15).

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- At this stage, the magnetizer lets go of the subject's thumbs; and, slowly pulling away his hands, and closing them, he lifts them along each side of the subject to the top of the subject's head. Laying his hands above the subject's brain, the magnetizer leaves them there for 10-15 seconds; and then passes them (opened) slowly down over the subject's ears, along the length of the arms, finishing at the fingertips.
- The magnetizer will make 8-10 similar passes; with each of the passes taking almost a minute.
- Laying his hands in the same manner, the magnetizer passes them down in front of the subject's face, the chest, and all the thorax, stopping, from time to time, at the top of the epigastrium, and pointing at it with the tips of the fingers. The magnetizer will continue, in this fashion, for half an hour to one hour.
- The laying of the magnetizer's hands, and his passes, are made at some thumb's length from the subject, without touching the subject.
- Each time the mesmerizer raises his hands, they will be closed; and each pass is made slowly, from the side, not facing the subject – to avoid the production of a going-back-and-forth ["*un va-et-vient*"] in the circulation, which could provoke congestion of the brain (something that might occur if the procedure was performed face on).
- The magnetizer makes a few passes, laying his hands above the cerebellum and moving them down behind the ears, the shoulders, and down to the arms.
- From the start to the finish, the magnetizer will only concern himself with what he wants to produce; so that, by the concentration of his will, he provokes the emission of fluid and transmits it to the subject.

Fig.5(b). Lafontaine's Technique
(translated from Lafontaine, 1860, pp.62-64.)

7.5 *After London*

Leaving London, Lafontaine toured the provinces (including Manchester), Ireland and Scotland. He returned, penniless, to France towards the end of 1842. According to his own (fanciful) account, he visited Naples in 1849; and, having restored sight and hearing, he was accused of blasphemously replicating Christ's miracles. The French Consul intervened on his behalf; and King Ferdinand II of Naples (1810-1859) made a royal decree: "*I consent to M. Lafontaine remaining in Naples, on the condition that will he not restore sight to the blind, or hearing to the deaf*" (Lafontaine,

1866, II, p.272). He returned to France in 1850, moving to Switzerland, where he remained until his death, publishing *Le* {60} *Magnétiseur* from 1859 to 1872. He died a comparatively wealthy man. [Without exception, Lafontaine's accounts of his life, work, and achievements must be taken with a very large grain of salt; and should be ignored unless verified from another independent contemporary source. For an extended account of Lafontaine's time in the UK see Yeates (2013, pp.103-228, 268, 296-298, and 551-567).]

8. *Braid and Lafontaine: Setting the Scene*

8.1 *Arrival in Manchester*

By the time he reached Manchester, Lafontaine was already a controversial figure. Informing its readers of the issues surrounding mesmerism, *The Manchester Times* of 13 November 1841 produced a reading list of English, French and German works (MT.1), plus a passage from Romer's introduction to *Sturmer, a Tale of Mesmerism* (i.e., Romer, 1841, (I), pp.3-8), that stressed the dangers of such a powerful tool in the wrong hands.

A week later (MT.2), it summarized Kluge's *Versuch einer Darstellung des animalischen Magnetismus, als Heilmittel* (1812): a work described by Crabtree (1988, p.64) as "one of the most researched and widely read early German works on animal magnetism".

8.2 *Demonstrations*

Lafontaine delivered five demonstrations in Manchester (9, 11, 13, 19, and 20 November 1841) before leaving for Birmingham, where he delivered four demonstrations. He returned to Manchester, delivering another five demonstrations (9, 10, 11, 17, and 18 December 1841) before leaving, promising to return. He never returned. He visited several regional cities before arriving in Liverpool in March 1842, where his presence provoked Hugh M'Neile's 10 April 1842 "*Satanic Agency and Mesmerism*" sermon (M'Neile, 1842; see Part III, Yeates 2018c). Lafontaine never attempted to produce "higher" mesmeric phenomena in his Manchester presentations (MG.1); and given that Braid's goal was *to replicate Lafontaine's phenomena*, "higher" mesmeric phenomena were never a subject of Braid's research.

8.3 *Braid, Mesmerism and Animal Magnetism*

Although Braid had not seen mesmerism, he *had* read about it, and *had been* told that very few people could be mesmerized—only those who could were "in a state of disease, or naturally of a delicate constitution, or peculiarly susceptible temperament"—and, to Braid, the attendant phenomena seemed "so exaggerated, or of such an extraordinary nature" (*Neurypnology*, p.15). Convinced by the *London Medical Gazette* (Anon, 1838a) that there was no magnetic agency

(*Neurypnology*, pp.34-35)—and given the well-known fraud perpetrated on Elliotson by the O'Key sisters (Anon, 1838b)—Braid was certain the phenomena were either due to "a system of collusion or delusion" or to "excited imagination, sympathy, or imitation" (*Neurypnology*, p.15).

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8.4 *Braid's Motivation*

So, neither *credulous* nor *incredulous*, Braid went to make a direct investigation of Lafontaine's mesmerism—rather than "entirely [depending] on reading or hearsay evidence for his knowledge of it" (Braid 1845, p.144)—and was most anxious to determine:

(a) Whether a *substantial* (rather than *metaphorical*) magnetic force was the agent of Lafontaine's effects.

(b) If there was a 'magnetic' force—which, as everyone knew, *always radiated 360°*—how could Lafontaine direct it?

(c) Did Lafontaine have any control over the mesmeric act?

(d) Did Lafontaine have any control over his initial connection with the 'magnetism'?

(e) Did Lafontaine have any control over the subsequent channelling of the 'magnetism'?

(f) Did Lafontaine's 'power over his subjects' lie *within Lafontaine himself*, or was it entirely due to the 'magnetic' force for which he was supposedly a conduit?

(g) What sort of person should be entrusted with the exercise of this power?

No doubt, as well, the Athenæum's committee was eager to hear the views of Braid, a reputable medical scientist, on the veracity of Lafontaine's phenomena; and, as an effect's *objective reality* does not substantiate proffered explanations (for instance, gifts in a child's Xmas stocking does not support claims for the supposed existence of Santa Claus), Braid had five concerns:

(a) Were the effects Lafontaine claimed veridical?

(b) Were the sensations Lafontaine's subjects claimed to experience veridical?

(c) If (a) and (b) were veridical, were they due to (i) collusion, (ii) pretence, or (iii) extensive subject training (*à la* Phineas Adams)?

(d) If they were veridical, and not due to collusion, pretence, or training, were they due to the fulfilment of a 'subjective' and 'unconscious' expectation by operators, observers, or subjects?

(e) If they were veridical, was that fact, per se, conclusive evidence of the truth of Lafontaine's claim of magnetic agency?

8.5 *Aftermath*

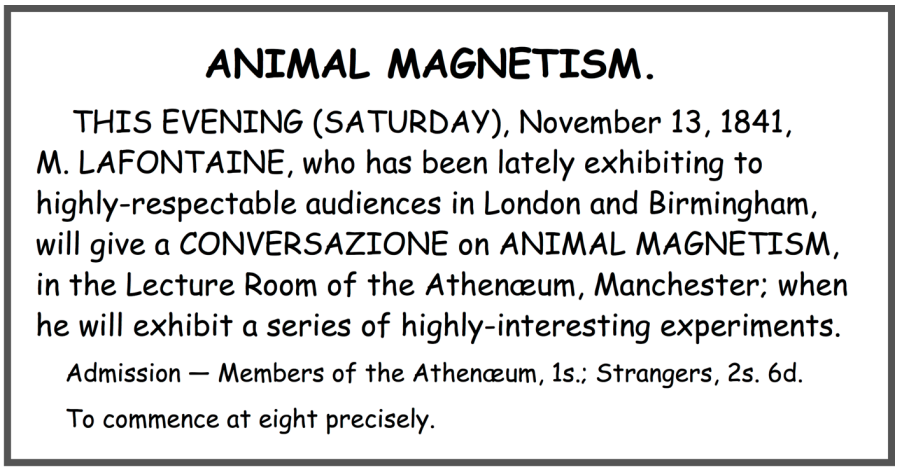
Although Braid's initial interest was in Lafontaine theories and practices, and the *identity* (*sameness*) of the effects his method produced to those of Lafontaine's—there was, of course, no identity of any sort between Lafontaine's and Braid's effects: one of Kaufmann's (2001) "*deceptive problems*"—Braid soon set those concerns aside, and exclusively concentrated on the clinical applications and therapeutic consequences of his own methods. Beyond his initial concerns with Lafontaine in particular, Braid paid very little attention to mesmerism, in general. [For a more expansive 'fine-grained' account than that which follows of Braid's extended interactions with Lafontaine over an eight-month period, see Yeates (2013, pp.139-271, 551-590, 599-620, and 742-745).]

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9. *Lafontaine in Manchester*

9.1 *Lafontaine's Conversazioni*

The audience at Lafontaine's second Manchester ***conversazione***—which included Braid's colleague, Daniel Noble—was considerably larger than the first. Lafontaine's lectures and demonstrations followed his usual routine: a lecture on the history and principles of animal magnetism, the outcomes of various French Commissions, demonstrations of catalepsy, pins, detonating caps, smelling salts, and electro-magnetic current on his own subjects, etc. Both *conversazioni* displayed Lafontaine's characteristic lack of success with audience volunteers (MG.1, MT.1); and, significantly, "Lafontaine [did] not attempt, even with his own subjects, to exhibit what are termed the higher states of mesmerism, *clairvoyance* and *prevision*" (MG.1).



ANIMAL MAGNETISM.

THIS EVENING (SATURDAY), November 13, 1841, M. LAFONTAINE, who has been lately exhibiting to highly-respectable audiences in London and Birmingham, will give a CONVERSAZIONE on ANIMAL MAGNETISM, in the Lecture Room of the Athenæum, Manchester; when he will exhibit a series of highly-interesting experiments.

Admission — Members of the Athenæum, 1s.; Strangers, 2s. 6d.

To commence at eight precisely.

Fig.6. Advertisement for Lafontaine's third Manchester *conversazione*, (*The Manchester Times*, Wednesday, 13 November 1841).

9.2 ***Enter Braid***

Braid attended Lafontaine's third Manchester *conversazione*. There was a large audience. Lafontaine's subjects displayed various degrees of insensibility. Six days later (19 November 1841) Braid attended Lafontaine's fourth *conversazione*. The auditorium was packed with a rather unruly crowd. A notice was posted that only "medical gentlemen" would be permitted on stage.

Before Lafontaine began, Braid rose from the floor demanding that "the first selected [by Lafontaine should be] some person … who had not even seen the operation [before]", rather than a previously magnetized subject, because, as a "medical man", Braid knew "the power of imagination" only too well, and that "he wished for nothing but to see the investigation conducted with fairness and discretion" (MG.3)—a demand that was not made to sabotage Lafontaine, but in order to eliminate one of Braid's "*sources of fallacy*" (see Yeates, 2013, pp.741-743).]

Refusing Braid's offer of himself as a subject Lafontaine began his advertised presentation; significantly, remarking that while he (Lafontaine) knew *what* magnetism did, he didn't know *how* it did what it did (MG.3). Later, Braid was one of three "medical men" allowed on stage to test the insensibility of a magnetised subject.

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9.4 ***Fifth Conversazione***

Braid attended Lafontaine's fifth *conversazione* the following evening (20 November 1841). Before Lafontaine began, Braid (from the floor) read the contents of a letter he had sent to Lafontaine that morning—*to which he had received no response*—the burden of which was that it was almost certain that the "wonderful effects" and the "surprising phenomena" elicited on the preceding evening were "attributable to sympathy", and had been produced by "the strength of the imagination alone" and, because of this, *Lafontaine should only use those who had neither seen nor at any time had been subjected to magnetic experimentation.* The chairman rejected Braid's proposal, on the grounds that "[dictating] the mode in which he was to conduct his experiments [was] a most unwarrantable interference with the rights and privileges of a public lecturer" (MG.4).

Braid's subsequent on-stage examination verified subjects' insensibility; and, significantly, Braid was greatly impressed by the fact that one subject could not open his eyelids (*Neurypnology*, p.16).

10. *Braid's "Experimentum Crucis"*

10.1 *Prelude*

Personally satisfied the subject really could not open his eyelids—and convinced a transformation from *condition*$_1$ to *condition*$_2$ (whatever that might eventually prove to be) and back to *condition*$_1$ had really taken place—Braid was equally certain that the transformation "was not … as the animal magnetizers allege … dependent on any special agency or emanation, passing from the body of the operator to that of the patient" (ibid., p.15), and had not "proceeded from, or [been] excited into action by another [person]" (ibid., p.32).

Having observed Lafontaine "with intense interest", and certain that he "had discovered its [*physical* and *physiological*] cause", Braid "considered it prudent not to announce [his] opinion publicly, until [he] had had an opportunity of testing its accuracy, by experiments and observation in private" (ibid., p.16).

10.2 *Experimentation on Self*

Once home—treating the operator-subject interaction as *subject-internal, operator-guided procedure*, rather than an *operator-centred, subject-external procedure*—and alone in the room, Braid placed a bottle on a shelf, the same height and distance as Lafontaine's eyes had been from his subject. Concentrating his gaze on the bottle's stopper, employing "a fixed and abstracted attention of *the mental and visual eye*" (ibid., p.12, emphasis added), his eyes closed within minutes. Having replicated Lafontaine's physical arrangement *vis-à-vis* his subject (see Fig.7), Braid had proved his point: Lafontaine's phenomena were not due to magnetic agency.

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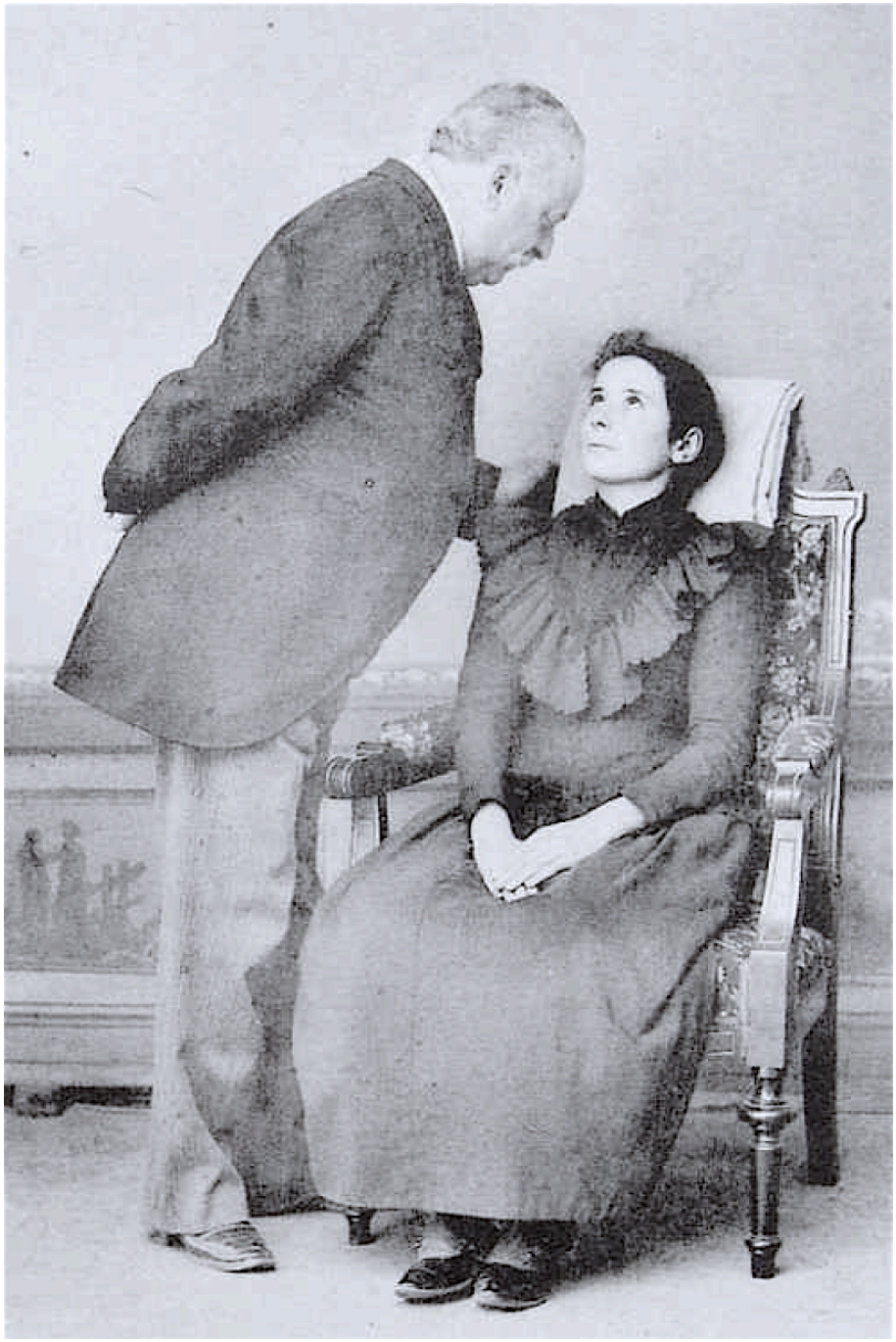


Fig.7. Two perspectives of the same physical arrangement:
(a) Charismatic operator's (downwards) 'magnetic gaze' (Lafontaine);
(b) Compliant subject's 'upwards and inwards squint' (Braid).
(Bertrán Rubio, 1896, Lamina VI)

10.3 *Experiments on Others*

Over the next two days, Braid refined his views. On the Monday evening (22 November), in the company of his family and a visitor (Mr. JA Walker), Braid presented his discoveries to Captain Thomas Brown, the eminent natural philosopher (Brown, 1827, 1829, 1844, 1845., etc.). In the process, Braid conducted several new experiments:

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(a) He asked Walker "to sit down, and maintain a fixed stare at the top of a wine bottle, placed so much above him as to produce a considerable strain on the eyes and eyelids, to enable him to maintain a steady view of the object" (*Neurypnology*, p.17). Replicating Braid's self-experiment, Walker was hypnotised in three minutes.

(b) Braid's wife, "[who] never saw [Braid] near [Walker], or touching him in any way whatever", "assuring all present that she would not be so easily alarmed", was next. Braid repeated the experiment, using the "ornament of a china sugar basin". She was hypnotised in two minutes (ibid., p.18).

(c) To eliminate any possible contamination from either *imitation* (Coe and Sarbin's (1966) "*role enactment*"), or *imagination* (Kirsch's (1985) "*response expectancy*"), Braid summoned a servant who knew nothing of mesmerism, and, "without informing him of his object … asked him to keep his eye fixed on the end of a spoon till he should see a spark of fire issue from it, intimating to him merely that it was some chemical experiment, which it was necessary to watch very closely" (MC.1). "In two minutes and a half his eyelids closed slowly with a vibrating motion, his chin fell on his breast, he gave a deep sigh, and instantly was in a profound sleep, breathing loudly" (*Neurypnology*, p.18).

(d) "[Braid] reprimanded him for his carelessness, and dismissed him from the room, telling him he ought to be ashamed of himself; and [the servant] went out of the room no doubt really ashamed of himself; but [Braid] called him in again and set him again to watch the spoon, when, in the course of three minutes, he was again asleep." (MC.1).

(e) He used Walker again with a different object of concentration. The result was the same as before. (*Neurypnology*, p.19).

(f) Finally, using Walker, "I also tried him *à la Fontaine* [sic], with the thumbs and eyes, and likewise by gazing on my eyes without contact, and still the effects were the same" (ibid., p.19).

10.4 *Induction Technique*

Although Braid never "claimed [to be] the first to discover that *contact* was *not* necessary, and that a magnetic fluid was not required to produce the phenomena of mesmerism", he was certain he had "illustrated these facts by the most simple and conclusive experiments probably which were ever adduced for that purpose" (ibid., p.20).

What was unique to Braid was his *physical* (rather than *metaphysical* or *mental*) explanation, and his physiological induction technique, which required a 'fixity of vision' on an 'object of

concentration', "by attention rivetted to something *without* the body"—as distinct from "attention [being] strongly directed *to different parts of the body*" (ibid. p.34)—at such a height and distance that the desired 'upwards and inwards squint' was achieved (e.g., Fig.8). In Braid's view, "upwards" was critical:

> A patient may be hypnotized by keeping the eyes fixed in *any* direction.
> It occurs most *slowly* and *feebly* when the eyes are directed straight forward, and most *rapidly* and *intensely* when they can be maintained in the position of a double internal and upward squint.

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Fig. 8. *The Hypnotic Ball* (c.1900): Charles Verdin's adjustable device—used at the Salpétrière Hospital of Paris to facilitate the production of Braid's 'double internal and upward squint' (Macdonald, 1908, p.201).

> It is now pretty generally known, that during the effort to look at a very near object, there is produced, according to the direction of the object, a double internal squint, or double internal and downward or upward squint, and the pupils are thereby powerfully contracted.
>
> (ibid., pp.34-35.)

Braid's technique involved much more than just the '*upwards and inwards squint*':

> Braid … who made use of fixation almost entirely, *considered a particular mental activity also necessary*.
> This is to be particularly noticed, because some people nowadays believe that they are

> using the method of Braid when they tell the subject to look steadily at something. In reality, *Braid considered a steady attention as well as a steady gaze indispensable if hypnosis were to be attained; the subject must think steadily of the thing he was looking at, and must not allow himself to be diverted from it.*
>
> (Moll, 1897, p.43; emphasis added.)

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10.5 *Watershed*

Given that Lafontaine's claims involved '*counter-intuitive events attributed to counterintuitive agents*', and that *extraordinary claims required extraordinary evidence*, Braid's *watershed* discovery—that his double 'internal and upward squint *plus* mental concentration' generated a 'state' *analogous to* that of Lafontaine's—demolished, *in one fell swoop*, all of the claims that the transformation from *condition*$_1$ to *condition*$_2$ was contingent upon either the presence of a 'magnetizer', or the agency of a subject-external 'magnetic' force.

Braid's master-stroke was to convert the issue into one of 'ordinary claims'; which, *ipso facto*, only demanded 'ordinary evidence'. From that moment, it up to Lafontaine to prove his claims (which he never did), rather than for Braid to disprove them.

10.6 *Significance*

In order to understand the importance of Braid's *experimentum crucis* (and its follow-up experiments), certain facts must be stated:

(1) At this earliest stage, Braid's sole concern was with Lafontaine's claim of magnetic agency for his *unable-to-open eyelids phenomenon*; it was only later that Braid became interested in the *somnolence*, *limb catalepsy*, etc.

(2) Lafontaine claimed to establish a 'magnetic' link through contact with the subject's thumbs; and, then, given 'magnetic rapport' had been established, use his mental power, exerted via his 'magnetic gaze', to control the subject.

(3) In relation to *effects*, (i) the 'public report' of the 1784 French Royal Commission into Animal Magnetism (Franklin, et al. 2002); (ii) the 'secret report' (Bailly, et al., 2002); and (iii) Mackay's (1841) survey of Animal Magnetism, all declared that "the prime question [was] not whether animal magnetism works, but whether it exists [at all]" (Gauld, 1992, p.26).

(4) All three (Franklin, et al., p.362 ; Bailly, et al., p.367; and Mackay, p.361) emphatically concluded that:

(i) there was no 'magnetic fluid';

(ii) [given a non-existing thing can't produce 'effects'], all (veridical) 'effects' must be due to something else; and

(iii) the observed effects could all be variously attributed to "*contact*", or to "*imagination*", or to "*imitation*".

(5) In 1784, the Marquis de Puységur (1751-1825), claimed to have produced "numerous … cures and alleviations" among his estate's peasants, by 'magnetizing' a large elm tree, setting stone benches round it, and hanging cords from its branches, which patients held onto while also staring at the branches (see Gauld, 1992, pp.40-44). These 'effects' were generally dismissed as due to *imagination* and *expectation*.

In summary:

(a) By proving there was no need for an operator (and, thus, no need for "*contact*"), Braid proved there was no 'magnetic' force involved.

(b) Braid proved it was the subject's upward gaze—not the operator's downward gaze—that was significant.

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(c) Braid demonstrated that successful inductions involved a *physical*, not a *metaphysical* process.

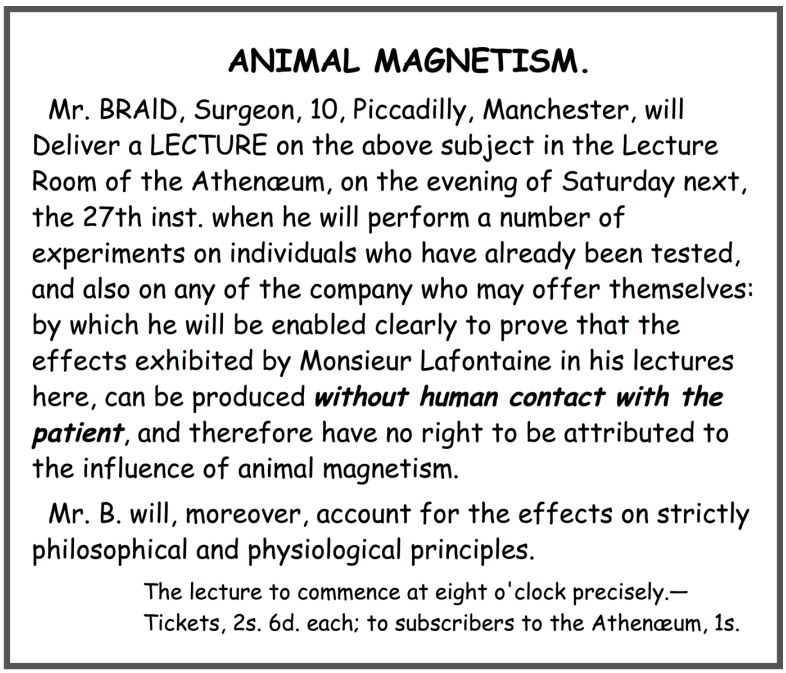
(d) Braid's separate experiments with Walker and Mrs. Braid demonstrated (i) the significance of the upward gaze, (ii) the importance of an object of concentration, and (iii) that the form of the concentrated-upon object was irrelevant.

(e) Braid's experiments clearly explained the Marquis de Puységur's (veridical) effects: they were inevitable consequences of his subjects' concentrated upwards gazing.

(f) The experiment with his servant proved his technique was successful without any "*contact*", without any possibility of "*imagination*" ('*response expectancy*'), and without any possibility of "*imitation*" ('*role enactment*').

(g) Braid's experiment, within which he (as operator) and Mr. Walker (as subject) replicated Lafontaine's operator-subject physical arrangement, also clearly demonstrated the significance of the subject's upward gaze.

Having performed his first 'self-' induction on the Saturday evening, and his first 'hetero-' induction on the Monday evening, and having successfully projected all of his experimental subjects into a 'state' within which they could not open their eyelids, it was obvious to Braid that, unlike Lafontaine, he could now rightly claim that he not only knew *what* 'it' did, but that he also knew *how* 'it' did what it did—and he decided, as a matter of urgency, to make his findings known immediately.



ANIMAL MAGNETISM.

Mr. BRAID, Surgeon, 10, Piccadilly, Manchester, will Deliver a LECTURE on the above subject in the Lecture Room of the Athenæum, on the evening of Saturday next, the 27th inst. when he will perform a number of experiments on individuals who have already been tested, and also on any of the company who may offer themselves: by which he will be enabled clearly to prove that the effects exhibited by Monsieur Lafontaine in his lectures here, can be produced ***without human contact with the patient***, and therefore have no right to be attributed to the influence of animal magnetism.

Mr. B. will, moreover, account for the effects on strictly philosophical and physiological principles.

The lecture to commence at eight o'clock precisely.—
Tickets, 2s. 6d. each; to subscribers to the Athenæum, 1s.

Fig.9. Advertisement for Braid's first public lecture,
(*The Manchester Guardian*, Wednesday, 24 November 1841).

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10.7 *Priority Claims*

Manchester surgeons, Joseph Ashbury Smith (1805-1862), and Joseph Peel Catlow (1798-1861), separately claimed priority over Braid's discovery. Catlow claimed to have privately expressed the view "that the whole of the *real* effects imputed to mesmeric influence are imputable to the undue or uncomfortable continuance of the same impressions on one or more senses, or rather the organs of sense" before Lafontaine's last *conversazione* (MG.5). Later, in his 3 February 1842 lecture, Catlow attributed the insight "that the real effects of mesmerism depended not merely on what was termed imagination, but on the undue continuance and repetition of the same sensible impression" to an earlier suggestion (the time was never specified) by Michael Satterthwaite, MD, MRCSE: viz., that the 'efficacy' of Lafontaine's 'thumbing' (or his 'gaze') was not in his thumbs (or his eyes), but in the consequent attraction, isolation, and monopolization of the subject's attention (MG.9). Smith (1841b) claimed that he had already offered an explanation that subsumed those of both Braid and Catlow (and had been shouted down) at Lafontaine's fifth *conversazione* (Smith 1841a).

In a letter to the *Manchester Times*, published on 4 December, Philip Henry Holland (1811-1886), LSA, MRCS, former secretary of the Manchester Medical Society (1835-1838), stated that he was the individual concerned (Holland, 1841), and that Catlow had privately expressed such views to him on either 18 or 19 November (viz., before Braid's first lecture). However, at Braid's Wednesday, 8 December lecture, Catlow's already fragile claim for priority was smashed, when

Holland agreed with Braid, that "*the whole of [Catlow's] oral and written statement was … implied and contained in a single question [that Braid had put] to Mr. Bennet*" (MG.7, emphasis added) at Lafontaine's third *conversazione* (six days before Catlow's remarks), and reported in the Manchester press three days later (two days before); namely:

> M. Lafontaine, after trying the operation [on Mr. Bennet] with the thumbs and fingers for seven minutes, disengaged one hand, and made passes at the eyes and forehead; but in nine minutes he desisted altogether, and Mr. Bennet arose, and said that at one time when the operator's hand was opposite his eyes, he thought he had lost the use of one of his hands, and tried it, but found he could move it.
> He felt nothing except a little in his eyes from looking M. Lafontaine so earnestly in the face.
> *Mr. Braid, surgeon: Have you felt any thing more than what might arise from the position of being confined, and your eyes being fixed?*
> *Mr. Bennet: No more.*
>
> (*The Manchester Guardian*, 17 November 1841 [MG.2, emphasis added])

10.8 *Catlow*

Joseph Peel Catlow (1798-1861), LSA, MRCSE, cousin of Sir Robert Peel, was a general practitioner, and one of the founders of the Manchester Medical Society (Elwood & Tuxford, 1984, p.194). Three years younger than Braid, and not admitted to Edinburgh's Royal College of Surgeons until 1826, he was very much Braid's professional junior. He published a paper on "Phreno-Magnetism" in 1843. {70} Another work, *On the Principles of Æsthetic Medicine, etc.*, although incomplete, was published posthumously (in 1867) by a benefactor (impecunious for his entire professional career, Catlow died penniless). Mainly dealing with *developmental psychology*—and, to a lesser extent, *holistic medicine*—it does not mention Braid, hypnotism, phrenology, mesmerism at all. He ceased practising medicine c.1855: "Catlow was compelled to retire early due to his controversial interest in mesmerism and aesthetic medicine" (UoM1). For some time, Catlow actively promoted his own (otherwise unsupported) claim for priority over Braid (e.g., Catlow, 1843); and, as both lecturer and audience member, displayed continuous animosity towards Braid.

11. *Braid's Lectures, Replicated Experiments, Illustrative Cases, and Technical Demonstrations*

11.1 *Sixteen Lectures*

In the six and a half months between his *experimentum crucis* and the publication of *Satanic Agency and Mesmerism Reviewed* (Braid, 1842b), Braid delivered sixteen public lectures in the space of just seventeen weeks (see Fig.10) through which he expounded his ever-widening range of conceptual

understandings, theoretical advances, and technical applications. It is significant that the profits from each of Braid's lectures were donated to public institutions or charities.

27 Nov. 1841: *Manchester Athenæum*
4 Dec. 1841: *Manchester Athenæum*
8 Dec. 1841: *Mechanics' Institute, Manchester*
17 Dec. 1841: *Mechanics' Institute, Manchester*
28 Dec. 1841: *Manchester Athenæum*
22 Jan. 1842: *Portico Rooms, Liverpool*
1 Mar. 1842: *Hanover Square Rooms, London*
2 Mar. 1842: *Hanover Square Rooms, London*
12 Mar. 1842: *Manchester Athenæum*
31 Mar. 1842: *Mechanics' Institute, Manchester*
1 Apr. 1842: *Templar's Hall, Liverpool*
6 Apr. 1842: *The Music Hall, Liverpool*
13 Apr. 1842: *Macclesfield Town Hall*
21 Apr. 1842: *The Music Hall, Liverpool*
28 Apr. 1842: *The Music Hall, Liverpool*

Fig.10. Braid's sixteen public lectures in seventeen weeks

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Braid always lectured to 'mixed audiences', rather than "confining them to the [medical] profession only" (*Neurypnology*, p.76); although, of necessity, his private *conversazioni* were restricted to specific audiences. It's remarkable that Braid, the structured thinker, could so clearly and coherently explain and display as much as he did in his first public lecture on 27 November 1841, just seven days after his *experimentum crucis*, and just five days after his first act of *hetero-hypnotization*. Even more remarkable: there's no record of Braid ever lecturing in public before that evening.

11.2 *Lectures*

Braid concluded each public lecture with a *conversazione*. On average, his lectures were an hour; his *conversazioni*, two to three. Audiences received an account his enterprise's origin, the basis for his current position, details of his responses to criticism, and 'work-in-progress' descriptions of his most recent technical, clinical, and theoretical advances; thus gaining both *knowledge by description* and *knowledge by acquaintance*.

11.3 ***Replication of Key Experiments***

Although lecturing before "*Mill's canons*" elaborated systematic methods of determining *causation* (viz., Mill, 1843, pp.450-479), and before the significance of (i) *replicable experiments* (experiments conducted *by others*, with *different subjects*, producing the same results), and (ii) *reproducible results* (others concluding the same from the same experimental results) were generally recognized, Braid's Edinburgh experience had trained him to present his discoveries in a way that anticipated Mill's insights.

Braid would re-stage the experiments from which his basic concepts had been derived; using, whenever possible, his original subjects. From this, his audiences not only verified his conclusions, but gained further respect for his structured reasoning. There was also the prospect that an audience member—or publication reader (e.g., Barrallier, 1842a, 1842b, 1842c, 1842d)—might suggest improvements.

11.4 ***Subjects***

Even today, when *demonstrating* specific hypnotic phenomena, one preselects those subjects that can manifest the phenomena in question; thus, the selection of demonstration subjects by Lafontaine, Braid, etc., was not evidence of any deception.

11.5 ***Illustrative Cases***

Wherever possible, Braid produced patients, in person. When promoting this new therapeutic agency, and stressing that all previous interventions had proven inefficacious (*opprobrium medicorum*), Braid did not name those responsible for earlier treatment—because the failure was *an indictment of the medical discipline itself*, not its practitioners. A constant criticism from Braid's commercial 'professional' enemies, was that, by stressing his own cures, *especially where others had failed*, Braid was exalting himself above his colleagues, and was *actively touting for trade*.

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Braid knew his discoveries not only meant that certain conditions previously beyond medical treatment were now treatable, but, also, that a number of currently-recognized conditions might need 're-thinking'.

11.6 ***Technical Demonstrations***

Once he had replicated his experiments using his original subjects, Braid exclusively used volunteers. Unlike Lafontaine, who was consistently unsuccessful with volunteers, Braid succeeded with almost every volunteer. {*Caveat*: As well as rejecting those unable to immerse themselves in the process, such as his rejection of surgeon Robert Churchman Hulley as a

volunteer during his BAAS presentation (see Part III: Yeates, 2018c) on the grounds that "[Hulley's] mind… would be actively engaged in studying the phenomena, instead of becoming passive" (Yeates, 2013, pp.324, 781-782), he also excluded those who were excited, restless, unable to concentrate, or physiologically unable to fix their gaze for an extended time.]

12. *Braid's First Three Lectures*

> It is well known that I have never made any secret of my modes of operating, as they have not only been exhibited and explained publicly, but also privately, to any professional gentleman, who wished for farther information on the subject. Encouraged by the confidence which flows from a consciousness of the honesty and integrity of my purpose, and a thorough conviction of the reality and value of this as a means of cure, I have persevered, in defiance of much, and, as I think, unwarrantable and capricious opposition.
>
> (James Braid, *Neurypnology*, p.11)

> My object is to dispel mystery, and elicit truth, in the simplest possible manner.
>
> (James Braid, in his fifth lecture, 28 December 1841 [MG.8]).

12.1 *First Lecture (27 November)*

The Lecture Room, packed with an estimated audience of 700, was informed that the evening's profits were being donated to the Athenæum. Braid entered the auditorium to loud applause. Lecturing from prepared notes (see Yeates, 2013, pp.139-151, MG.5, and MT.3), Braid carefully explained his initial concerns with Lafontaine's "mesmeric operations"—N.B. Braid always referred to Lafontaine as a *mesmerist* (a maker of certain physical movements), and not as a *magnetist* (a manipulator of certain forces)—his observations of Lafontaine, and his confidence in Lafontaine's delight to learn just how much light his (Braid's) investigations had thrown on this mysterious subject so soon.

Braid was convinced he had discovered the true physiological cause of Lafontaine's effects at the *conversazione* seven days earlier; but, he admitted, rather than speaking out, he decided to test his hypothesis in private. This decision was "very fortunate"; for, not only were his views verified, but he also discovered a means of induction {73} that "scarcely a single individual could resist", with which, he was certain, he could "mesmerize" the majority of that evening's audience within a few minutes.

He outlined Monday's events: his successful experiments, Captain Brown's view that "nothing could be more conclusive than this", and how, in order to avoid "*imitation*", he had experimented on one who knew nothing of animal magnetism. He repeated his Monday evening experiments with Walker, and with his servant. "Three important facts" proved his servant's unable-to-open-the-eyelids response was not due to the agency of 'animal magnetism':

(a) there had been no physical contact between the two,

(b) Braid had used no motion of any sort during the operation, and

(c) there had been no eye contact of any sort between the two (in fact, Braid had not even *glanced* at him).

It is significant that, at this early stage of his investigations, Braid roused Walker after only two minutes. Deferring to Lafontaine's experienced view that one should not "subject the patient to a high degree of the operation … on a first trial", Braid "did not think it prudent to allow the subject to remain in that state any longer" (MG.5).

At this point, Catlow interrupted, claiming priority; the chairman refused his request to address the meeting, and "it was moved and carried, that Mr. Braid proceed with his experiments, and the elucidation of his theory, without any further interruption" (ibid.).

12.3 *Conversazione*

The meeting became a *conversazione*. Braid conducted a new demonstration with his servant. This time, "instead of the bottle, a long cork was fastened by one end to a linen bandage, which was tied around his head, so that the cork projected like a horn from the centre of his forehead" (ibid.). Obviously, staring 'fixedly' at a cork projecting horn-like from the centre of one's forehead—4 inches from one's eyes, and 60° above one's line of vision—presented a far greater mechanical challenge than staring at Walker's concentration-object two to three feet distant, 45° above his line of vision. Braid soon abandoned this method.

As a final demonstration, he applied his technique to "Mr. W", Lafontaine's last subject on the preceding Saturday. Once he stopped "W's" fidgeting, and got him to fix his gaze on the cork, *he produced the same unable-to-open-the eyelids phenomena, without any thumb pressure, hand waving, or fixed operator gaze*. His ability to produce the Lafontaine's phenomena through "other means", Braid argued, had proved his point; viz., that it was all centred on the very same "principle", regardless of the "instrument" employed (MG.5).

Finally, in response to questions—and "ask[ing] for every indulgence [from his audience], as it was only since the preceding Monday night that he had discovered it" (ibid.)—Braid delivered an extended, coherent exposition of his physiological theory in which he displayed the exceptional detail of his structured thinking in {74} such a short time, and just how seamlessly he had connected his new procedure with the canonical knowledge of the day (see Yeates 2013, pp.146-149).

Braid fielded questions on the potential consequences of operating on a subject for a considerably longer period of time, on whether "manipulation" was necessary to produce catalepsy, and, finally, if he were to experiment further, "what kind of operation he would then perform". His response was forthright:

> He had not [yet] made up his mind as to what would produce these further effects. So far as he had investigated, he had told [the audience everything]; and not many men would have been ready to come before a public audience, and tell them so much [at such an early stage of their investigations].
> What the effects [the questioners had] referred to might be produced by, would require a longer time to work out; but having got the key, [N.B. "***the*** key", not "a key"] he considered that the rest would be comparatively easy to discover.
>
> (MG.5)

A week later, during his second lecture (MG.6), Braid explained further, noting that, whilst others had reported dangerous effects, *he had never seen them occur*. Notwithstanding this, he took the "cautious" position that, with only limited experience, and given (i) the seriousness of these supposed effects, and (ii) that they "were likely to result from too long a continuance of the experiments", *he was not confident, at this stage, of conducting extensive experiments on any one subject*. Whilst deferring to Lafontaine's experience, he doubted that *his own procedures* would produce "apoplexy, epilepsy, and even death [if] the experiments were carried too far", or if his subjects were to remain in this state too long—specifically because "the effects [of his procedures] were mental and corporal, muscular and percipient; [with] the state of mind, the organs of sense, and the muscular system, all influenced".

After three and a half hours the meeting ended. Braid announced he would repeat his lecture on the following Saturday. Those who had seen Lafontaine at work agreed that Braid's method had produced certain 'effects' that were somewhat analogous to some of Lafontaine's; but they were not convinced they were identical. The *Medical Times'* report of Braid's first lecture was brief and to the point: "Mr. Braid, of Manchester, explains the phenomena of magnetic sleep, by the fatigue of the rectus and levator muscle of the eye, caused by a continuously strained and intent gaze at an object viewed under an acute angle" (Anon, 1841).

12.4 *Second Lecture (4 December)*

On Wednesday (1 December 1841) advertisements appeared in the Manchester press, the same as that in Fig.9, except that, rather than "deliver a lecture" it had "will repeat his lecture" (Braid, 1841a). The following appeared at the foot of the Manchester Times' report of his first lecture:

> It may be interesting to the public to learn that Mr. Braid has since [his lecture last Saturday] succeeded in producing catalepsy on the same principle, and we believe will make experiments before his audience this evening, when he repeats his lecture for the

benefit of the Night Asylum and the Town Mission.

(MT.3).

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A new advertisement appeared in the Saturday edition of the *Manchester Times* declaring that it would now be "a second lecture"—and, among the promised effects, was the production of "*the cataleptiform state… without human contact with the patient*" (Braid, 1841b, emphasis in original)—along with a very positive pro-Braid piece (Fig.11), no doubt written by Archibald Prentice, the owner of the newspaper (who had attended Braid's first lecture, and also had direct personal knowledge of Braid's investigations in the interim).

Once again, Braid spoke from prepared notes (see report at MG.6). He announced that he would never lecture again; and, so, this was his last chance to make *ex cathedra* statements on matters he thought important. At this early stage, Braid was simply investigating an item of scientific and philosophical curiosity—Lafontaine's claims of 'magnetic agency'—unconnected with his profession; thus, any further involvement in "public investigations of the subject [of mesmerism]" would be inimical to his ongoing medical practice. His second lecture covered more ground than the first,

> combining Mr Braid's first discovery of physical means of closing the eye, and inducing somnolency, with a second discovery, made since the first lecture, viz. that, immediately afterwards, the subjects passed into the cataleptiform state, and that by placing the limbs in every variety of position, before the rigidity increased to the extent exhibited by M. Lafontaine, he could give to them and fixed position, and vary that position a pleasure by a mere touch.
>
> (MG.6)

Further, his inability to *explain* the effects of mesmerism was irrelevant; for, as they all knew, "no medical man [or] physiologist … was yet able to explain the nature of seasickness" (the existence of which was not a matter of controversy). Stressing that no magnetic agency was involved; and that, with his method, "[mesmeric] effects were produced *independently of imagination, sympathy, or imitation*" (emphasis added), it was his considered view that, the more an individual was experimented on, the more susceptible they became. He spoke of a girl with "an affection which baffled all that had been done for it" and how, without any therapeutic intent, his experiments had remedied her "affection". [This remedial outcome, independently confirmed by members of the girl's family, seems to be the first (albeit entirely unintended) therapeutic act performed with Braid's developing procedure (MG.6).]

Moreover, he said, provided (i) the target object (whatever that might be) was at an appropriate angle, (ii) they *maintained a fixed gaze* on the designated target, and (iii) they *wholly occupied their mind with the target object*, he was certain that he could "mesmerize" 200 individuals in 15 to 20

minutes. In the ensuing week he had produced catalepsy in 40 different individuals. Also, on the previous evening, at a private *conversazione* attended by "several of the clergy and medical men, and other individuals of scientific attainment", he not only projected five individuals into the "cataleptiform" state—wherein their "muscles became so rigid as to retain any position in which they were placed, while the flesh resembled the solidity of marble … in the course of a few minutes"—but he was easily able to "dissipate the spell", whenever he chose, "in a few seconds".

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MESMERISM EXPLAINED

We are glad to say that Mr. Braid has given irrefragable evidence that the effects ascribed to animal magnetism can all be produced without contact or mesmeric passes – glad because truth is at all times valuable, and because the clear explanation of the phenomena of somnolency and catalepsy will effectually prevent any of the moral evils that might have arisen while there was so much of mystery about their cause.

Mr. Braid has shown that somnolency and catalepsy and the inability to raise the eyelids arise from the paralysis of muscles kept for a few minutes in a state of tension. These effects are produced on any one who chuses [sic] to look ***intently*** on an object placed a few inches from the eye, and at an angle of about 45 [degrees] above them; and Mr. Braid will show to night [sic] that catalepsy will follow if [his double internal and upward squint] experiment be carried further. There is very great merit in this discovery, for although there have been some shrewd ***guesses*** at the causes of the "mesmeric influences", no one before him has given practical proof of the accuracy of any theory.

He very properly confined himself, in the illustrations of his first lecture, to the production of sleep and the inability to raise the eye-lids; but to night he will illustrate all the effects ascribed to magnetism, and show that the "mesmeric passes" have nothing at all to do with them.

There are some reasons why [this evening's] attendance should be good. The proceeds go to two institutions that are productive of an immense amount of good; the lecture will be very interesting and so will be the illustrations; and there will be a number of clever young professional men there, some of whom will deny the reality of the effects produced, and others will claim to themselves the credit of knowing all about them before Mr. Braid uttered a word of explanation of his theory. It is amusing now that the matter has been shown to be so simple, how angry many folks are that Mr. Braid should have anticipated them.

Fig.11. Editorial, *The Manchester Times*, Saturday. 4 December 1841.

Braid then produced his female cook and a footman, with corks bandaged to their foreheads. Their eyes closed within a minute. They both manifested catalepsy, and held various poses. Each was restored within seconds. Then, using Lafontaine's method, he repeated the process, and, once again, produced eye closure and a "cataleptiform state". Despite the obvious differences between the two inductions, Braid was certain that he had provided "fair and legitimate proof" that the same "somnambulistic state" was induced with each.

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Reminding his audience that Lafontaine was only able to mesmerize four not-before-mesmerized individuals in all of his five Manchester exhibitions, Braid produced five subjects, three female, two male, with corks tied to their foreheads, who sat in a row. All five subjects began their staring at the same moment. Four achieved eye-closure (in 12, 40, and 50 seconds, and 3 minutes) and, although the fifth's eyes did not close at all, "[his] stare was a fixed and apparently unconscious one, and his right arm was raised and fixed, being in the cataleptiform state, [even] though his eyes were open. In response to a question, Braid said he "could mesmerize an individual in a dark room … if only he would look fixedly at one point for a long time".

Braid then tried something new. He had seen one of the young women two days earlier. He decided to test whether she would obey his verbal requests. Asking her to rise from her chair, which she did, "although apparently asleep and her eyes closed" he, then, "by gentle entreaties, induced her to walk along the platform, which she did, with those peculiar characteristics of caution and care which are described as displayed by somnambulists". Then, Braid "asked her to curtsey, which she did, and, in a low voice, [she] answered several questions which he put to her". Restoring the young woman, he asked "[if] she recollected walking, or curtseying, or talking, or being asked questions". She did not, she said, but "had been in a dream, and [had] dreamed she was walking somewhere". Braid then mesmerized her using Lafontaine's approach. Her eyes closed in 15 seconds. Another subject, using Braid's approach, who stared at "the blaze of the gas chandelier" closed her eyes in 10 seconds. After several more demonstrations, the meeting terminated at 11:30PM.

12.4 ***Third Lecture (8 December)***

On Wednesday, 8 December, the Mechanics' Institution's theatre was packed. Braid told the audience that he had only agreed to lecture at the last minute from "his desire to serve the institution" and "his personal regard for the directors" (MG.7). When moving a final vote of thanks to Braid, a director revealed that "the directors had previously engaged with M. Lafontaine [to lecture], but that gentleman afterwards declining, they went to Mr. Braid, who, *though he had on*

[the previous] Saturday evening expressed his intention not to lecture again, had consented to forego his own convenience and wishes, to confer a benefit on the institution in which they were assembled" (MT.4, emphasis added).

His third lecture—*delivered just 15 days after his first hetero-hypnotic induction*—provided an even more refined theoretical explanation (see Yeates, 2013, pp.165-167), and his technical demonstrations of "corking", etc. were just as effective as before. He emphasised that his earlier failures (due to eye rolling, winking, hand wringing, inability to keep both eyes directed to the same point, etc.) had clearly shown that it was just as important to have "the body in subjection" as it was to have the mind kept "entirely intent on doing what I direct" (MT.4). His fortnight's experience had already demonstrated the importance of the subject sitting "in the erect posture", rather than reclining, in order to maximize their capacity to "intently" concentrate their mind, maintain a fixed gaze, and control their body. He also noted that sitting subjects consistently achieved far greater degrees of catalepsy.

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MANCHESTER MECHANICS' INSTITUTION

The Directors have much pleasure in announcing, that, at their urgent request, Mr. BRAID, Surgeon, has kindly consented to REPEAT his LECTURE on ANIMAL MAGNETISM on WEDNESDAY EVENING, December 8, in the Theatre of the Institution; the proceeds of the lecture to be added to the funds of the institution.

On this occasion Mr. Braid will show the effects of his important discovery by exhibiting its power of producing sleep, insensibility to pain, the ***cataleptiform*** state, and somnambulism and ***clairvoyance***, upon a number of patients, who will walk, hold conversation, act as required, and even name what is held before them, whilst the eyelids are closed.

Doors to be open at seven o'clock, and the lecture to commence at eight o'clock.

Admission — Members free; Non-subscribers One Shilling.
By order of the Directors.

HENRY DAY, Hon. Sec.

Fig.12. Advertisement for Braid's Third Lecture, *The Manchester Guardian*, Wednesday, 8 December 1841 (Day, 1841a).

At this this stage of affairs, given that Braid's only goal was the refutation of Lafontaine's claims of 'magnetic' agency—rather than (i) appraising "mesmerism" (whatever that might or might not be) or (ii) promoting his yet-to-be-established realm of *hypnotism*—he had been strikingly successful in producing 'somnolence', 'catalepsy', 'somniloquism', and 'artificial somnambulism' (*artificial* =

'produced by human artifice') with his own method. Observing, however, that none of that evening's demonstrations had produced any *new* phenomena—as a further step towards establishing what he would later identify as "*sources of fallacy*" (see Yeates, 2013, pp.741-743)—he then conducted an entirely new experiment, which clearly demonstrated what Lafontaine labelled "*clairvoyance*":

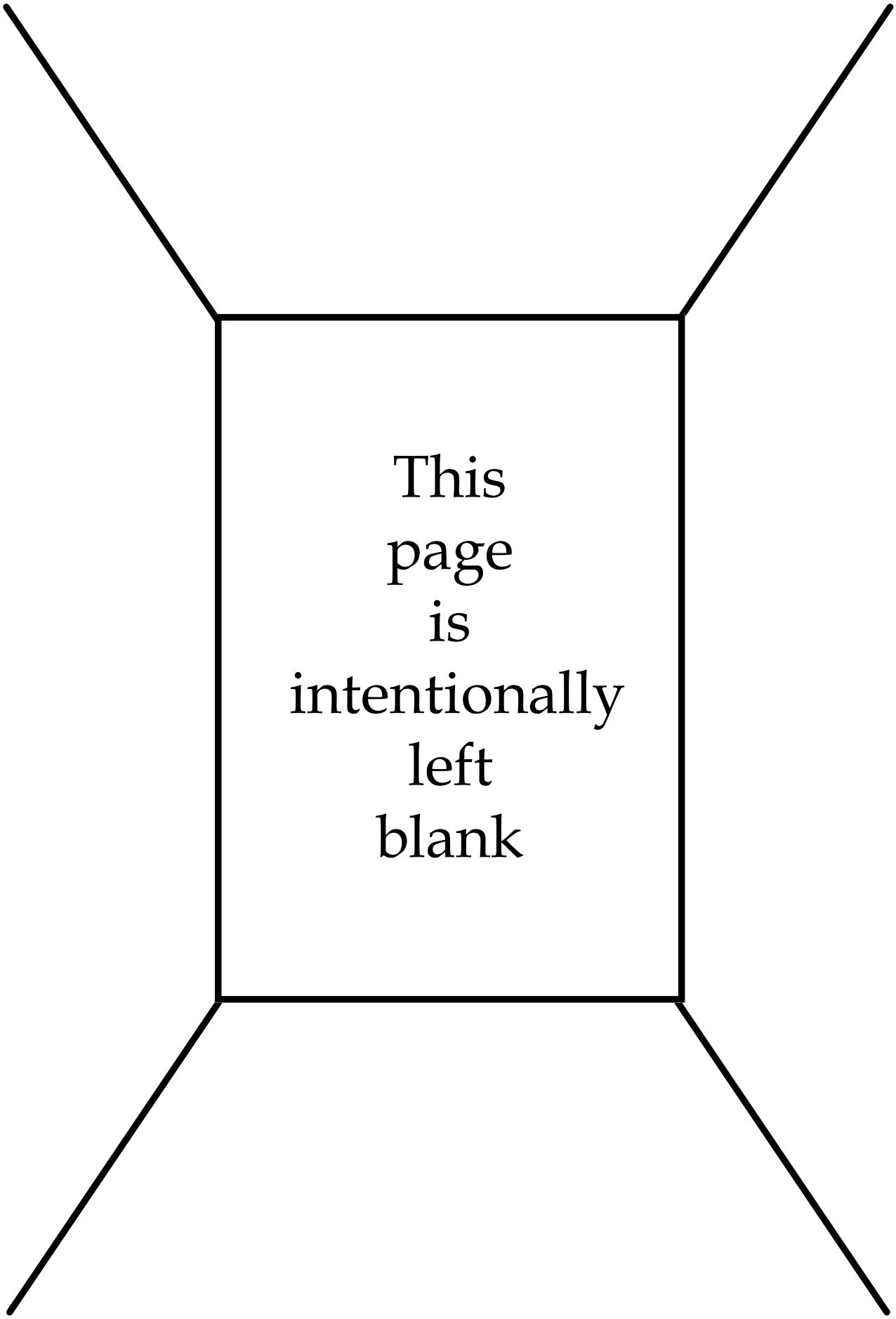
> The girl of sixteen whose somnambulism we noticed [earlier that evening], was again placed in the sleep-waking and sleep-walking state; and, with her eyes closed, she passed cautiously about the platform.
> Mr. Braid then held his watch before her closed eyes, and she told him that it was a watch. It was, however, objected that she might easily do this, without any remarkable power of sight, as she could not fail to hear its ticking.
> Mr. Braid then substituted his pencil-case, which she named, as if she saw it.
> Half-a-crown was next held up towards her closed eyes, and she said it was a shilling.
> One gentleman held up a glove, not level with her eyes, but higher, even above the level of her forehead, the girl standing near him at the time; and she said it was a glove.
> The gentleman subsequently asked her, when restored, if she could see clearly, and she replied in the negative; adding that she could see where {79} the light was, that it was light, and any things passing between her and the light appeared like shadows.
> If any things were held up pretty close, and she looked in that direction very earnestly, she could see the form of the object, though she could not tell minutely all it[s] peculiarities.
> Similar experiments were tried on another of the girls, which was partially successful. She acknowledged that she did not see very well that evening; but she was able to distinguish and name a small pair of bellows, and a pencil-case, held up near her forehead.
> On one occasion, the pencil-case was held up; and some one, at the same time, produced a bunch of keys. When asked what she saw, she immediately said, "a bunch of keys"; being apparently misled by their sound; but, almost immediately afterwards, she corrected the mistake, and said she saw a pencil-case.
> In the course of these experiments, Mr. Braid held his watch before one of the girls, and desired her to follow where she heard the ticking.
> At first he walked away, holding the watch towards her; but afterwards he stood still, and merely moved the watch in different directions, causing her to change or retrace her footsteps instantly, as he moved the watch.
> This experiment was strikingly illustrative of the greater acuteness of the sense of hearing in this state.
>
> (*The Manchester Guardian*, Saturday, 11 December 1841 [MG.7])

When asked if he could "produce the same effects on strangers", "none of [whom] had submitted to the operation before", Braid replied, "Certainly—I am willing to take any number of ladies and gentlemen who may present themselves". Twenty volunteers rushed the stage; and, six having been excluded, fourteen sat facing the audience. Braid had corks and bandages for nine; and the remaining five were asked to look at the knob at the bottom of the auditorium's gas chandelier. He asked all of them to stare at their target with "a steady gaze", and "as far as possible to abstract

their minds from everything going on around them" (MT.4.). All started staring at the same time; and, within 30 seconds, two were 'somnolent' with their arms 'cataleptic'.

There were many distractions. Braid was forced to leave the stage three separate times "to restore the self-mesmerized individuals" who had operated on themselves, and fallen back in their seats with their eyes closed (MG.7). As well as these absences from the stage, and the considerable random noise coming from the appreciative audience, Braid's constant to-and-fro movement across the stage (to 'restore' subjects, or place 'cataleptic' limbs in certain positions) seemed to distract several of the other subjects, such that, from time to time, they "diverted their gaze". Even so, Braid achieved success with ten of the fourteen in the short time available.

> [The ten] were in a state of somnambulism, answering the voice of every one who thought proper to call them.
> The scene was a most extraordinary and interesting one, and the theatre rung with the plaudits of the company.


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[Braid] concluded the proceedings with the following words:–

"I trust the experiments performed here this evening have satisfied the company who have honoured me with their presence.

I can honestly avow they have been done fairly, and simply with the view of eliciting truth.

I consider they have been conclusive in establishing the fact I undertook to prove, namely, that the phenomena produced ***by*** animal contact; and ***without*** animal agency, farther than that exercised by the individual to be magnetised, are one and the same.

Those who would maintain a contrary opinion can only be considered as contending to make a distinction without a difference, or they must admit that I have discovered a still more efficient and universal mode of producing effects even beyond that of the supporters of animal magnetism; that there is a mode of disarranging the centres of the nervous and circulating system, as well as the muscular and mental functions, to an extraordinary extent, by the method I have been so fortunate as to discover and develop to you, no one can deny.

The universality of the application of this agency is far more general, and therefore, if the other, as applied by the professors of animal magnetism, were good for any thing, this must be far more useful.

I have been asked what is to be achieved by the discovery?

I have to reply it is capable of being turned to great good or great evil, as all other powerful agents are, according to the use that is made of it.

Fig.13(a). Braid's Final Address, *The Manchester Times*, Saturday, 11 December 1841 (MT.4)

> Whilst the patients were thus walking about with closed eyes, it is a singular fact that they never came in contact, and Mr. Braid called attention in particular to the care yet ease with which they turned round, making one heel a sort of pivot [upon] which the body could wheel about with safety.
>
> (*The Manchester Times*, Saturday, 11 December 1841 [MT.4]).

Without the subject's-gaze-diversion, the *Guardian* reporter was certain that "[Braid's] experiment would have succeeded to a greater extent". The veracity of the ten subjects' condition was examined and attested by various audience members (including Holland, and two other "medical men"). Lafontaine, absent for the

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One of these [viz., subjects] exhibited here to-night has derived great good from it already; but I again repeat the caution formerly given – that it ought only to be attempted by those who have a thorough knowledge how to control its operations, as the consequences may be of the most disastrous nature.

In as far as the study of the subject may be calculated to throw light on the treatment of disease, I shall not lose sight of it; but my professional engagements are too numerous to permit me to devote much time to the investigation as a mere toy or pastime.

I know there may be much discussion, and, judging from what I experienced last Saturday night, much unfair endeavour by a few to misrepresent and invalidate the importance of what I claim as my discovery, but my views now go forth to the world, and I feel so confident they are based on truth, that I fear not that the verdict of the scientific world will yield me the satisfaction that I have not altogether laboured in vain.

It is not my present intention to take up more time in delivering public lectures on the subject for, as already named, I cannot do so without encroaching on my professional engagements; and I have too much devotion to my profession, and too deep a sense of the responsibilities which it involves, to suffer mesmerism or any other purely scientific pursuit, to abstract my mind from what is, and ought to be, the great object of my life – the study of what means can best alleviate the ills that flesh is heir to."

(Great applause.)

Fig.13(b). Braid's Final Address, *The Manchester Times*, Saturday, 11 December 1841 (MT.4)

lecture, but present (at Braid's invitation) for Braid's demonstrations, refused Braid's request to come on stage and be one of the examiners.

Braid repeated a number of his 'old' and 'new' demonstrations. Positive that he had clearly shown that "the effects attributed to magnetism… can be produced independently of such agency", and that he had done so "*with a certainty and frequency which has never yet been attained by any one either in this country or elsewhere*" (MT.4, emphasis added), he gave what he thought was his final address (see Figs.13a and 13b).

However, this turned out to be just the beginning of Braid's enterprise.

[Continued in Part III]

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Dr Lindsay B. Yeates, PhD (History & Philosophy of Science), University of New South Wales (UNSW); MA (Cognitive Science), UNSW; Graduate Diploma in Arts By Research (History & Philosophy of Science), UNSW; BA (Asian Studies), Australian National University (ANU); Diploma of Clinical Hypnotherapy; Diploma of Traditional Chinese Medicine; Certificate of Competence as a Therapy Radiographer, Royal Melbourne Institute of Technology (RMIT). A Fellow and Life Member of the Australian Society of Clinical Hypnotherapy (ASCH), and the Australian Hypnotherapists' Association (AHA), currently Editorial Assistant at the *Australasian Journal of Philosophy*, and an Adjunct Assistant Lecturer in the School of Humanities and Languages at the University of New South Wales, Lindsay has been variously involved with hypnotism, hypnotherapy, and the training of clinical hypnotherapists for more than fifty-five years.

Following the award of MA for his interdisciplinary cognitive science studies in 2002, and a Graduate Diploma in Arts for his research into the mechanism of thought experiments in 2004, Lindsay was awarded a scholarship to undertake extensive post-graduate research into the events surrounding James Braid's discovery of hypnotism in Manchester in 1841. His acclaimed, groundbreaking doctoral dissertation, *James Braid: Surgeon, Gentleman Scientist, and Hypnotist*, was accepted by the examiners without correction. He was awarded a PhD in 2013.

Driven by a life-long interest in scientific hypnotism and suggestion—in particular, the nature, form, and content of efficacious hypnotic suggestion—Lindsay's professional career reflects his view that a major obligation of any scholar is not only to actively engage in the prolonged studies demanded for both knowledge creation, and the distillation and the refinement of the knowledge so created, but also, to diffuse and disseminate that knowledge. Lindsay's on-going studies, the refinement of his personal understandings, and the non-commercial sharing of his research, form a significant part of that long-term endeavour.

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